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## Original Communications.

### *ON THE TREATMENT OF PUERPERAL CONVULSIONS.*

By E. P. Hurd, M.D., Newburyport, Mass.

THERE is no calamity connected with the puerperal state so alarming as convulsions. Eclampsia and placenta prævia (the mortality of these two accidents of pregnancy and parturition being formerly about equal) must always be the terror of the obstetrician, but puerperal convulsions will always inspire most dread in a household.

My first case of puerperal eclampsia was in 1867, when I was a young practitioner. I was summoned four miles into the country, and found my patient, a plethoric woman, in convulsions. I was obliged to send home for forceps and chloroform, and while waiting for these I bled the patient from the arm, abstracting a quart of blood. As soon as I obtained my forceps, I administered chloroform, and delivered the patient of a dead child. Calomel and opium were administered, a grain of each every hour (Churchill). The convulsions returned after a respite of two hours. Though I had chloroform enough with me, I dared not administer it freely, especially as I had to contend with the expostulations of the family and other attendants. After six hours of almost continuous paroxysms, the patient succumbed.

The anæsthetic treatment was just then coming into vogue.

In the fall of 1868 I attended a meeting of the Eastern Townships Medical Society in Sherbrooke, Province of Quebec, and heard an address by Dr. F. W. Gilbert, of Hatley, Stanstead County, on "Puerperal Convulsions." Dr. Gilbert advocated an almost exclusive treatment by chloroform. His method was to push the chloroform to full anæsthesia, and so to keep the patient under its influence that, while the use of the drug was from time to time interrupted during the cessation of the fits, a few whiffs of the chloroform vapor would be sufficient to arrest any twitches of the facial and ocular muscles, the immediate precursors of the eclamptic seizure.

Dr. Gilbert read notes of twenty cases which had come under his observation during a practice of upward of ten years in Stanstead County; these had all been treated by chloroform without bleeding, and all had recovered. He stated his belief that the proximate cause of puerperal eclampsia was reflex hyperexcitability of the spinal cord, which was better controlled by chloroform than by any other remedy.

Since that date I have had upward of twelve severe cases; a part of these were reported in the *Medical Record*, September 14, 1878. I have always placed my principal reliance on ether or chloroform, and thus far all my cases of puerperal convulsions have recovered. I have not bled once, nor have I made much use of chloral.

The following case is reproduced from the *Medical Record*. It is a fair sample of cases which I have seen.

"In 1875, Mrs. W., a primipara, albuminuric, with excessive œdema. Labor was progressing finely, with dilatable os, when a violent convulsion came on. I applied ether, and sent home for forceps. The ether promptly allayed the convulsions. I kept the sponge, saturated with the anæsthetic, near the mouth of the patient for six hours. Delivered her by forceps of a living child within an hour of the invasion of the fit. There was no return of convulsions. Perfect anæsthesia was not kept up during all of the long period mentioned; it was only when warning was given by restlessness and facial spasm of an impending general outbreak, that the ether was pushed to its fullest physiological effect. A fair degree of anæsthesia, however, was maintained during the whole period. And here, I believe, is the secret of the success of the anæsthetic treatment; no timidity must be shown; the ether or the chloroform must be used unsparingly and perseveringly; the erethism of the bulbus and spine must be annihilated, or it will annihilate the patient."

In 1883 I attended a case of puerperal convulsions with Dr. F. A. Hale. The patient was of the stout, plethoric kind, such a one as, theoretically, should be bled, and bled freely. The baby (dead) was delivered by forceps immediately after the first convulsion. This woman was kept almost constantly under chloroform for eighteen hours. If we allowed her to come out from the influence of the anæsthetic, general convulsions were sure to supervene. These convulsions, when permitted to make headway, ended in an asphyxiated, cyanotic, syncopal condition, which seemed to menace instant death. There was no safety but in sitting by the patient, sponge in one hand and the chloroform-bottle in the other, ready, on the least warning, to press the anæsthetic. In fact, a good part of the time the sponge, with a few minims of chloroform on it, was kept a few inches from the mouth of the patient. We pursued this treatment three full hours after all convulsive action had ceased. This patient (who had remained unconscious from midnight till 9 P.M.) made a good recovery. But here comes a very aggravating circumstance. We got no credit for saving this woman's life. A Christian scientist (against our wishes) had been allowed access to the house, and even to the room of the sick woman. He remained several hours in the house during the afternoon, and claimed the credit of the cure. This was freely awarded him by the parents and husband of the sick woman! "*Sic vos non vobis vellera fertis oves!*"

In the *Medical Record* aforesaid is a brief report of nine cases of puerperal convulsions occurring in the practice of Dr. G. W. Snow, of this city. All made a good recovery under ether; no other remedy was used.

The late Dr. Enoch Cross, of Newburyport, after more than fifty years of active practice, wrote me as follows: "I have had experience in all kinds of treatment of that dire disease. In my earlier years, I used to witness disastrous results, but since I have trusted to ether, have had uniform success."

Similar testimonials to the efficacy of the anæsthetic treatment have been presented by other of my *confrères*,—Dr. F. A. Howe, Dr. J. F. Young, Dr. John Crowell, Dr. J. J. Healy, Dr. D. W. Colcord, etc. The latter

tells me that in all his recent cases he has trusted to ether, and has saved all his patients.

Professor Braun, of Vienna, records sixteen cases treated by chloroform; all recovered. Chailly Honoré (1859) relates that eighteen out of nineteen cases which he treated by chloroform got well.

The use of anæsthetics in puerperal convulsions now rests on a solid basis of clinical facts, and a practitioner who neglects this mode of treatment when chloroform or ether is to be had, comes little short of criminality.

In the puerperal state we have inordinate irritability of the entire reflex cerebro-spinal system; we have an active poison in the blood keeping up that irritability; we cannot speedily depurate the blood of that poison, but we can protect the central nervous system from its influence, and we can reduce to a minimum that reflex excitability. "The evidence in favor of chloroform in puerperal convulsions," says Barnes,* "has been greatly accumulating since Simpson's time. It should be carried to the surgical degree,—that is, to the extent of rendering the spinal cord irresponsive to irritation of the sphincters. The convulsive fit is rendered less violent, and it is shortened. When anæsthesia is induced in anticipation of a fit, this may be almost entirely averted, and is sure to be moderated. . . . An essential condition for obtaining from chloroform the full benefit it is capable of giving, is to keep close watch over the patient, so as to administer it on the slightest warning of a fit."

"I have never," says Phillips, obstetric physician to Guy's Hospital, "witnessed any untoward symptoms from chloroform in these cases, though I have administered it continuously for several hours, and sometimes when the patient was already in a deep comatose condition between the attacks."† It is almost needless for me to add that this has been my own experience.

The choice between ether and chloroform must be left to the individual practitioner. Chloroform is certainly more speedy, and makes a more profound impression than ether; it has been generally regarded as safe when administered in eclampsia. At least, I am not aware of any death ever having occurred from the use of chloroform on such an occasion. Nevertheless, there is a wide prejudice against this anæsthetic, and there are practitioners who will never consent to employ it under any circumstances.

### GENERAL CONSIDERATIONS ON PUERPERAL ECLAMPSIA, ADJUVANTS TO THE ANÆSTHETIC TREATMENT.

In discussing the treatment of puerperal convulsions, the pathogeny of this disease, and the leading indications to be met, should be clearly kept in view. It is, of course, well understood that the pregnant or puerperal woman is liable to convulsions from the same causes which produce convulsions in the woman who is not pregnant. Thus, a hysterical woman may have convulsions of a decidedly hysterical character during pregnancy. These fits are of much less serious import than those of true eclampsia. It is generally not difficult, from the nature of the convulsions and the antecedents of the patient, to decide as to the diagnosis. The fits are lighter and less general, the coma is less profound, or absent altogether, in hysterical convulsions. The frothing at the mouth and the biting of the tongue, the heavy, stertorous breathing after the fit, which distinguish albuminuric eclampsia, are not present in the hysterical. Moreover, the urine is not albuminous, and there is freedom from anasarca; there is not even œdema about the ankles; lastly, the antecedents of the patient show the hysterical constitution. Hysterical convulsions are more frequent during the earlier than during the later months of pregnancy, but they may come on at the close of gestation, as a result of trifling causes, such as excessive fatigue and want of sleep, and disordered digestion. In one of my patients, Mrs. C., living on Strong Street (March, 1883),‡ the convulsions were plainly of the hysterical kind. This was a delicate, nervous woman; had all her lifetime had hysterical fits from trifling causes; when labor came on, every pain was followed by twitching of the facial muscles, jerking and contortion of the limbs; the patient was with difficulty kept from throwing herself off from her bed; after the fit, consciousness speedily returned. These fits so interfered with the progress of the labor, that I was obliged to keep the patient under chloroform for several hours. The presentation was high and the os undilated. I, however, succeeded, after a while, in performing digital dilatation, which enabled me to introduce my hand, when I turned, and delivered her of a living child. For several days after confinement I had to

* Braithwaite's Ret., Part LXVIII. p. 222.

† "Guy's Hosp. Rep.," 1870–1871, p. 343.

‡ Dr. A. B. Dearborn attended this case with me.

keep Mrs. C. under the influence of chloral, on account of the tendency to recurrence of the fits.

In the treatment of hysterical convulsions, occurring during labor, the use of anæsthetics is just as much indicated as in albuminuric eclampsia, though the anæsthetic need not be pushed to the same extent.

An epileptic patient is likely to have the customary crises during pregnancy and about the time of parturition. There is a marked resemblance between the eclamptic and epileptic seizure, but the history of the case, the examination of the urine, the absence of anasarca, etc., will plead in favor of the epileptic origin. It is, I think, seldom that true epilepsy complicates labor; when it does, it is not of serious import. Dewees's and Churchill's division of puerperal convulsions into hysteric, epileptic, and apoplectic, is, from the standpoint of more modern science, objectionable. His epileptic and apoplectic varieties constitute the eclampsia proper of recent writers.

It is now agreed that the great majority of cases of convulsions occurring about the time of parturition are associated with albuminuria, general œdema, and renal insufficiency.

Frerichs, in 1851, was one of the first to point out the close resemblance between the convulsions occurring in pregnancy and the uræmic convulsions of Bright's disease. His conclusions, to which nearly all subsequent investigators have given their assent, are: "That true eclampsia occurs only in pregnant women suffering from Bright's disease, and it bears to the latter the same causal relation as convulsions and coma in Bright's disease in general. It is the result of the uræmic intoxication, with which also in its mode of manifestation it agrees."*

According to this view, then, the dominant pathogenic lesion is renal insufficiency, the exciting cause, uræmic blood-poisoning; or, in other words, retained urinary excrement irritates the spinal motor centres and provokes convulsions. By uræmia, we, of course, understand, with Bouchard, "A complex kind of poisoning, in which participate all the poisonous principles introduced into or originating in the organism." But when we have said that these poisonous principles produce convulsions by irritating the spinal cord, we have not said all. The cerebrum is also affected, as is evidenced by the loss of consciousness. This last phenomenon is better accounted for by the hypothesis of anæmia of the hemispheres from contraction of the arterioles than by any other hypothesis, as Lusk has well shown. Deiters has, moreover, demonstrated "that the motor fibres of the extremities and trunk have their first central termination in the pons," while Nothnagel has proved "that a collection of ganglionic cells in the substance of the pons furnishes the motor centre from which the convulsive impetus takes its departure."† The theory, then, is that the centres of the muscles of animal life in the mesocephalon and cord are irritated by poisoned blood, and that the arterioles which supply the cerebral cortex are in a state of tonic contraction, owing to the same cause acting on their vasomotors.

It is quite possible that in fatal cases of puerperal eclampsia, the brain may sometimes be found the seat of apoplectic effusion, owing to the giving way of fragile blood-vessels during the strain imposed upon them by the fit. In plethoric women, the blood-pressure is often high during the paroxysm. The veins of the cephalic extremity are turgid with blood, owing to the restraint put upon the return circulation by the convulsed muscles, and intra-cranial rupture is very likely to take place. This fact, however, does not justify the establishment of an apoplectic variety, nor does the existence of coma, however profound, and stertorous breathing, nor do even the results of numerous post-mortem examinations. Angus Macdonald reported, in 1878, "that in the examination of the brain in eclamptic persons, he found the meninges congested and the venous sinuses filled with blood, while at the same time there was marked anæmia in the deeper layers of the brain structure. The ventricles . . . were found full of serum."‡

Assuming, then, that, except in rare cases, where the convulsions can be traced to peripheral irritation in the nervous or exhausted (with or without the hysterical disposition), the true pathogeny of puerperal eclampsia is uræmic poisoning, the leading indications in prophylaxis are to combat the renal insufficiency, cause of the uræmia, and promote elimination by the kidneys and other emunctories. The amount of work imposed upon the kidneys may be lessened by ordering a milk diet, by limiting the amount of proteids in the food, and by the free use of saline cathartics (Glauber salts, Carlsbad

* "Lusk's Midwifery," p. 530.

† Lusk, *loc. cit.*, p. 534.

‡ Lusk, *loc cit.*, p. 534.

salt, Rubinat water). The physician should, as far as possible, obtain information as to the amount of urine passed daily by his patient, and any indication of suppression of the renal function should be at once met by the proper remedies, and even by the induction of labor, if uræmic symptoms should supervene. The patient should be guarded from colds and from attacks of indigestion, and full doses of the tincture of the chloride of iron should be given three times a day, as Lusk recommends, "for its diuretic and hæmatinic properties, and likewise to improve the tone of the weakened vessels." It is possible that in some cases jaborandi, or its alkaloid, pilocarpine, may be used with benefit to promote diaphoresis when the kidneys are secreting but little urine. I am aware that some writers rely on jaborandi when the eclampsia has declared itself (see a valuable article by Dr. Everett S. Warner in the *Medical Record*, July 12, 1879, also another in the same volume of the *Record* by Dr. E. E. Mather). I do not, however, think that this mode of treatment will ever be a popular one, at least to the exclusion of anæsthetics.

The occasions justifying the induction of premature labor, according to Tyson,* are two in number:

1. In Bright's disease, complicating pregnancy, where puerperal convulsions attended nephritis in a previous pregnancy.

2. In all primiparæ where Bright's disease had existed prior to pregnancy. Here premature labor should be induced as soon as the fœtus is viable.

Tyson mentions an additional class of cases, where uræmic symptoms have suddenly made their appearance. Such a patient I saw last winter (January, 1889) with Dr. J. Q. Adams, of Amesbury. This woman (Mrs. S.) had had a previous delivery, which was perfectly natural. When she came under Dr. Adams's care, she was pregnant seven months. The prominent symptoms were obstinate and incoercible vomiting, and a condition of stupor, from which the patient was not easily aroused. The urinary secretion was scanty, and on two examinations, made by a competent chemist, was found to contain less than half the normal quantity of urea. Finally, there was for twenty-four hours entire suppression of the renal function. Dr. Adams very properly brought on labor by artificial dilatation of the os, ridding the woman of a dead child. The patient was comatose when I saw her. We injected subcutaneously alternately caffeine and tincture of digitalis, giving internally calomel, the only medicine that could be retained. Mrs. S. had slight convulsive seizures for several successive days. Under the caffeine and digitalis injections the pulse (which had been very feeble) rose, and the kidneys resumed their tasks. The third day after delivery, the quantity of urine had become nearly normal. Recovery gradually took place.

*Relation of the Gravid Uterus to the Eclampsia.*—Whatever theory may be entertained concerning the relation of the gravid uterus to the eclampsia, whether in some instances the compression which the uterine tumor exercises on the renal vein may produce in the long run a hyperæmia, then an inflammation of the kidneys, as Rayer supposes,—or whether the renal stasis is brought about by direct pressure on the kidneys themselves, or the ureters, the primiparous state with very resistant abdominal walls favoring the pressure (Cazeaux),—certain it is that pregnancy and Bright's disease seem, in the cases under consideration, to sustain a causal relation to each other,—a relation so intimate that the cessation of the pregnancy is followed by speedy amelioration of the symptoms caused by the disease, if not by complete recovery. Hence, in cases of puerperal convulsions, there is every interest in speedily clearing the womb of its contents, and this I would regard as the leading indication. Labor must be brought on, or completed as speedily as possible, by forcible dilatation of the os, if need be, by turning, or by the use of forceps.

A second indication is to abolish reflex spinal excitability. This has been already alluded to, and the utility of anæsthetics considered. I need not return to the subject of anæsthetics. Morphine injections have lately come into vogue. Dr. Clark, of Oswego, N. Y., was, I believe, one of the first to advocate the free use of hypodermic morphine in puerperal eclampsia. His article in the *American Journal of Obstetrics*, published in 1880, made considerable impression in this country. I have not his paper by me, but I remember that he advised hypodermic injections of morphine,—¼ to ½ grain,—frequently repeated, till, it may be, two or three grains were administered. The patient was to be as speedily as possible brought under the sedation of the morphine. Professor G. Veit, in the *Prager Medizinische*

* Am. Med. Ass. (meeting June 27, 1889).

*Wochenschrift*, states that he has employed these injections in many cases with success. In order to produce narcosis, he was in the habit of combining subcutaneous injections of morphine with the inhalation of chloroform. The initial dose of morphine was ½ grain, and this was followed by still larger doses. In one case, he gave about 3 grains in the course of the twenty-four hours.

This kind of treatment has become very popular, and I am inclined to think that many practitioners in this country are in the habit of placing greater reliance on hypodermic injections of morphine, or morphine and atropine, than on the free use of anæsthetics.

Dr. G. W. Orr, of Michigan, reports in the *Medical Record*, vol. xxi., a case in which two hypodermic injections of ¼ grain morphine, one hour apart, arrested the convulsions in a very obstinate case. He asserts that chloroform had failed.

Nevertheless, the following remarks may be in order:

1. Morphine does not act with that certainty in allaying spinal excitability that absolute reliance can be placed on it.

2. It may even increase the medullary erethism by increasing congestion of the cerebro-spinal axis. Hypodermic morphine is "a sharp-edged tool," which may do the utmost harm, instead of doing the good desired. I am myself afraid of these large hypodermics of morphine in puerperal eclampsia, with deep coma and apoplectic tendencies.

3. Morphine cannot procure any sedation that cannot equally well, and with greater safety, be obtained by chloroform, pushed to complete anæsthesia.

*Veratrum Viride.*—At a meeting of the Iowa State Medical Society, held January 27, 1880,* Dr. G. M. Staples, of Dubuque, read a paper on "A New Method of arresting Puerperal Eclampsia," in which he claims to have promptly arrested puerperal convulsions with uninterrupted success for nine years past with hypodermic injections of veratrum and aconite, every twenty to thirty minutes, until the system was brought under their influence. Average dose, 4 to 6 drops of the former and 2 to 3 of the latter.

Norwood's tincture of veratrum and the officinal tincture of aconite root were the preparations employed. Effects, he says, will be observed in fifteen minutes, and no ill results have been experienced from the punctures. He reports three cases in full from among those treated in this manner, in which the results were most gratifying. In all three post-partum convulsions were present; patients were profoundly comatose; spasms were frequently recurring, and in one all other remedies had been exhausted in vain. He finds the two drugs combined more efficacious than the veratrum alone, while a smaller dose is required.

In the May number of the *American Journal of Obstetrics*, 1871,† Dr. H. Fearn, of Brooklyn, contributed an article on "Veratrum Viride in Large Doses as a Substitute for Blood-letting in Puerperal Convulsions," in which he recommended the tincture of veratrum in doses varying from 15 minims to a teaspoonful, repeated every five or ten minutes until the pulse became soft or vomiting set in. For several hours after the convulsions are arrested, he advises the veratrum to be administered in smaller doses, in order to keep the pulse below fifty to the minute. It reduces arterial tension better than bleeding.

It is claimed that this remedy is without danger, but considering the cardiac depressant properties of veratrum viride, it is not probable that the profession generally will ever be persuaded of the safety of these large doses, and prefer this drug to chloroform.‡

*Blood-letting.*—There is still a general consensus among medical authorities as to the utility of blood-letting as an adjuvant to other measures designed to lower arterial tension and lessen the irritation of the vaso-motor and convulsive centres. Lusk states the advantages of venesection very fully. It is rapid in its action; it lowers vascular tension and depresses motor excitability; it favors absorption, and renders the patient more susceptible to the influence of other remedies. The quantity of blood to be abstracted varies from eight to sixteen ounces, which should be taken from the arm *pleno rivo*.

Tyson places blood-letting in the very first rank of remedies to be used in puerperal eclampsia.§ "Afterwards, or coincidently with this measure, anæsthetics are often of

* *Medical Record*, vol. xvii. p. 211.

† Quoted from "Lusk's Midwifery," p. 537.

‡ For further recommendations of veratrum viride, see *Medical Record*, 1876, p. 450. Dr. Battey states that in Georgia it is highly esteemed in puerperal eclampsia. He would feel reluctant to prescribe it in ½-drachm or drachm doses. Such doses are not devoid of danger.

§ *Medical News*, May 1, 1886.

great service, and the patient is kept with great advantage more or less thoroughly under the influence of chloroform or ether." From this it will be seen that he would make the anæsthetic an adjuvant to bleeding.

It is needless to multiply citations to show the present status of the profession relative to bleeding in puerperal eclampsia. The medical journals teem with cases where bleeding coincidently with other remedies was tried, and where the patients for the most part got well. If we go back to "Dewees's Text-Book," we shall find him advocating bleeding, even in the anæmic and hysterical.* The modern obstetrician selects his cases. He would not bleed the anæmic and neurasthenic; he reserves the lancet for the robust and plethoric, and especially for cases with sharp, bounding pulse, high, arterial tension, and apoplectic tendencies. Singularly enough, I have failed to see such cases, except very rarely. Were such cases to present themselves, I should not hesitate to bleed. The loss of sixteen, twenty, thirty-two ounces of blood in the puerperal condition is often of no great consequence. Many spare women lose more than that quantity the first day or two after parturition. And yet, as I have above intimated, my patients have too often been anæmic, debilitated, neurasthenic, to make bleeding warranted, even in the writhings of eclampsia. Besides, with chloroform and its adjuvants, chloral and free purgation, I have seemed to have all the therapeutic armor which I needed. It has appeared to me, in fact, that I have obtained from chloroform pushed to anæsthesia just the effect on the circulation and sensory, vaso-motor, and muscular innervation which is claimed for bleeding. After a brief period of excitement, the subject falls into a state of collapse and complete anæsthesia. The muscles, before in a state of tonic or clonic contraction, enter into resolution. The last muscle paralyzed is the masseter; sometimes it is still in a state of spasm when all the other muscles are in resolution. The sensibility disappears totally, the reflexes are abolished, the pulse is slowed and enfeebled.† Schiff has shown that the vascular pressure is markedly diminished under chloroform inhalations, so that chloroform seems to give the principal advantages which are sought from the lancet. Moreover, the results of chloroform alone in eclampsia have been far more successful than the results of bleeding alone. According to Charpentier,‡ the mortality in the hospitals of Paris from bleeding alone has been forty-five per cent.; from chloroform alone, eleven per cent.

Perhaps the wiser, safer course will be, in suitable cases, to associate anæsthesia with moderate bleeding. Chloroform, during the brief period of excitement following its administration, raises the pulse and the arterial tension. It is possible that, in cases of high, vascular pressure (as in the robust and plethoric, or in interstitial nephritis), this temporary increase of blood-pressure might be detrimental. If bleeding be first practised, the subsequent administration of chloroform would be safer.

In concluding what I have to say under this head, it will be proper to allude to some of the objections which have been raised to the use of chloroform in eclampsia. It has been said to be irrational "because it produces congestion of the nerve-centres, and may thus increase that cerebro-spinal congestion, which is already so much dreaded in eclampsia." "Chloroform increases the asphyxia of eclamptic subjects already predisposed to this complication," and its use "has been followed by puerperal mania."§ Such objections as these are advanced by Depaul, who does not hesitate to withdraw three quarts of blood from an eclamptic patient, thinking thus to "render the spinal bulb anæmic and deaden reflex irritability." As Charpentier well observes, "It is to be feared that depletion, carried beyond certain limits, may itself become a cause of irritation to the brain and cord, as is the case after profuse hemorrhages, of which the final symptoms are almost always convulsive." "Bleeding also impoverishes the blood of an eclamptic patient," and "forces her into a chloro-anæmic state, the intensity and persistency of which may give rise to great alarm."‖

On the whole, I believe that the dangers apprehended from the free use of chloroform are more imaginary than real, and that the ill effects which may possibly arise from its prolonged use are far less than those which are likely to attend free bleeding, or even the unstinted exhibition of morphine hypodermically, whose paralyzing action on the central innervation is of so much longer continuance.

* "Dewees's System of Midwifery." Philadelphia, 1828.

† Dujardin-Beaumetz, "Dictionnaire de Thérapeutique," art. "Chloroform."

‡ *Thèse d'Agregation.*

§ Charpentier, "Treatise on Obstetrics," vol. ii. p. 137. Wm. Wood & Co.

‖ Charpentier, *loc. cit.*

There is a great deal of testimony as to the utility of chloral hydrate in puerperal eclampsia. According to Testut's statistics, chloral has given better results even than anæsthetics.* So well satisfied is Charpentier with the chloral treatment, that after bleeding, he gives to it the preference over chloroform anæsthesia. He speaks favorably of its use as a prophylactic before confinement, when there is reason to apprehend convulsions, and during the attacks he would give large doses: "At first we give 60 grains to our patient; if this is not retained, or only partially, we give immediately a second, and, if necessary, a third dose, until the medicine is borne. Whether the attacks continue or cease, we do nothing for a few hours, say five or six, if necessary, and it is only at the end of this time that we give another 60 grains of chloral." In one case, Charpentier states that he gave as much as half an ounce in twenty-four hours. Where the chloral cannot be taken by mouth, it can be administered by enema (the yolk of an egg, three ounces of milk, one drachm of chloral, ten drops of laudanum). Charpentier does not regard disturbance of cardiac innervation and organic heart-trouble as contraindicating the administration of chloral in puerperal eclampsia. As for the *modus operandi* of chloral in this affection, it does good by the same action which renders it an invaluable hypnotic and antispasmodic; it stupefies the cerebro-spinal centres, and renders them insensible to the causes of the attack. The effects of chloral are not so speedy as those of chloroform, and they are more profound and prolonged; therefore, as a remedial agent, chloral is not so manageable. There are disadvantages attending its administration: the patient is not always in condition to swallow, even in the interval of the paroxysms, and will not always retain the chloral enema. Moreover, reliance on the rectal administration of this remedy presupposes a confined state of the bowels, and full purgation is certainly sometimes indicated. Therefore, I am persuaded that the voice of the profession will be more and more in favor of assigning to chloral a second place in the therapeutics of puerperal eclampsia,—*i.e.*, as an adjuvant to chloroform or ether.

Sometimes it is necessary in the treatment of this dire disease to strike a quick, strong blow, which will be felt at once over the entire economy, as when the violence of the convulsions threatens instant death. Here more will be gained by the prompt exhibition of chloroform than by waiting for the slower action of chloral, veratrum viride, or morphine.

I have nothing to say relative to the uses of bromide of potassium in puerperal eclampsia. In view of the uncertainty of action of this medicament, the immense doses required to produce spinal medullary sedation, its slowness of action, and the immense superiority of chloral, he would be an idiot who would resort to bromide as the principal or exclusive remedy.

Another and final indication is the elimination of the poison which, by exciting the motor centres, causes the convulsions. This indication, which is really primary (*indicatio causalis*), requires considerable time for its fulfilment, and during this time the patient may die from tetanus of the heart or respiratory muscles; hence it must be kept subordinate to the indication to calm the erethistic nerve-centres. When spinal excitability has been allayed by chloroform, then means may be taken to promote elimination. Bleeding has been regarded as depurative, but it is hard to understand how, by lessening the whole mass of blood, we can improve the quality of what remains. Purgatives seem sometimes to act favorably. It is always well, early in the treatment, to put a 10-grain calomel powder on the tongue. Afterwards, when the patient can swallow, a dose of Glauber salts may be given. I do not think that anything can be gained by resorting to elaterium; it is too drastic and depressant. The calomel, followed by Glauber salts, will produce several copious, watery stools, which will relieve the engorged kidneys, also clear the blood of urea and poisonous ptomaïnes.

Diaphoresis is frequently beneficial. Subcutaneous injections of ¼ of a grain of pilocarpine are followed by profuse sweating, and there is thus a considerable elimination of the *materies morbi*. According to Charpentier, in thirty-four cases where pilocarpine has been used for eclampsia, it acted well in twenty cases, two died; nine cases had such pulmonary complications that it had to be given up.

Charpentier, who has well collated the literature of the subject, concludes "that in dangerous cases pilocarpine ought not to be

* Thus, the revulsive treatment has given a mortality of fifty per cent.; blood-letting, thirty-five per cent.; purgative treatment, fifty-six per cent.; anæsthetic treatment, 17.8 per cent.; chloral alone, four per cent. (cited by Charpentier).

used exclusively. One of its advantages is to accelerate labor. Barker, on the contrary, who has used it in six cases, has seen bad results from it in every case, either in the heart or lungs, and does not believe that it should be used in eclampsia, and accepts it only as an adjuvant."*

Hot baths and wet-blanket packs have been used with favorable results by Liebermeister and Breus, while Jaquet and Polster have counselled wet-sheet packs to promote diaphoresis. Breus claims to have saved ten out of eleven cases by the hot-bath treatment. Other means, however, as the inhalation of chloroform and the administration of chloral, were also tried, so that it is hard to say how much credit was due to the baths. †

To sum up, the treatment of puerperal eclampsia includes the prophylactic treatment and the treatment of the convulsive seizures. Many pregnant women have albuminuria and nephritis, and go to their full term without convulsions. In these cases, the kidneys, though damaged, have never ceased duly to fulfil their *rôle* as blood depurators. In other cases, there are early warnings that there is danger ahead. Among the symptoms of renal insufficiency are headache, change of temper, drowsiness, ringings in the ears or photopsia, perhaps more or less dimness of vision, or blindness of one or both eyes, dizziness, dyspnœa, especially on exertion, nausea, and vomiting; the urine is scanty and loaded with albumen, while the percentage of urea is not more than one-half or one-fourth the normal. The patient may complain of involuntary twitchings and of general prostration.

Here the duty is plain. The patient must refrain from work, be put on a diet of milk, with or without Vichy water, and fruits, with a minimum of animal food. Saline diuretics, as cream of tartar or acetate of potassium, may be prescribed, and tincture ferri chloridi in full doses three times a day; a full dose of Glauber salts in the morning to promote free elimination by the bowels. It may even be expedient to give at bedtime a full dose of fluid extract of jaborandi to produce profuse sweating, or administer hypodermically 1/8 of a grain of pilocarpine, or even resort to the wet-pack or hot-bath. If, in spite of these efforts to relieve the engorged kidneys and protect the irritated nerve-centres, the patient becomes worse and convulsions seem imminent, premature labor should be induced by rupturing the membranes, or by the use of Barnes's water-bags.

When called to treat a woman already in the writhings of convulsions, if labor has not already commenced, it must be expedited by artificial means under chloroform. If labor has considerably advanced, and the os is dilated or dilatable, the patient must be immediately delivered by the forceps or by version. A 10-grain calomel powder may be placed on the patient's tongue, and if the vascular tension seems high, sixteen ounces of blood may be taken from the arm. It will be seldom desirable to repeat this venesection. Chloroform should be administered to complete anæsthesia, and the patient should be kept under its influence as long as convulsions threaten. As adjuvant to the chloroform, a full dose of chloral may be given by mouth or by rectum. Possibly in obstinate cases a full injection of morphine may be advisable.

I believe that this treatment will be more effectual and will save more patients than any other therapeutic method.

* Charpentier, *loc. cit.*, p. 136.

† THERAPEUTIC GAZETTE, 1888, p. 395.

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## *THE HYPODERMIC USE OF MERCURIALS IN THE TREATMENT OF SYPHILIS.*‡

BY L. WOLFF, M.D., PHILADELPHIA, PA.§

THE introduction of hypodermic medication by Alex. Wood, in 1857, was soon followed by various investigators and experimenters with mercurials, applied in a similar manner. Among them was Hebra, in 1860, who noted from injections of corrosive sublimate, dissolved in water, a rapid deflorescence of specific eruptions in the neighborhood (?) of the puncture. Scarenzio, in 1864, injected calomel, suspended in mucilaginous fluids, and reported eight cases with highly satisfactory results. He was closely followed by Ambrosi, Ricord, and Montefork with like results, and their observations were confirmed by Berkley Hill in England and Bergh in Denmark.

Thus far the method was largely experimental, and not until Lewin, in Berlin, published the results of many cases successfully

‡ Read at the January meeting of the James Aitken Meigs Medical Society of Philadelphia.

§ Physician to the German Hospital of Philadelphia; Demonstrator of Chemistry, Jefferson Medical College, etc.

treated with injections of corrosive sublimate at the Charité Hospital in Berlin did the hypodermic medication with mercuric sublimate find more general recognition and application. He proved, while starting with $\frac{1}{12}$ to $\frac{1}{8}$ grain, that injections of even ½ to 1 grain might be made without fatal or serious consequence. Citing the cases of one hundred and forty-four males and three hundred and fifty-six females, or a total of five hundred patients, he deduced that the total amount of the mercuric salt necessary to cause a complete disappearance of all symptoms to have been for males .17 gramme, or about three grains, while for females only .135 gramme, or a little over two grains, sufficed. Salivation was reported to have occurred in seventeen and a half per cent., and relapses were noted in only thirty-seven and a half per cent., against eighty-six per cent. of relapses by the other methods practised before that period at the Charité. Lewin concludes that the symptoms disappear in a ratio of rapidity with the amount of sublimate injected.

Lewin's observations were soon confirmed by those made at the clinics of Sigmund and Zeissl in Vienna, where the hypodermic injections of calomel were also further studied. Zeissl observed that .02 gramme, or ⅓ grain, of the mild mercurial chloride, suspended in glycerin and water, and injected every day, brought about disappearance of the milder cutaneous syphilides within two to three days, and that, as a rule, a total of .3 gramme (five grains) to .5 gramme (seven and a half grains) of calomel administered in this way sufficed to abate all visible symptoms. He deduced that the greatest objection to this mode of treatment is the pain it gives rise to, both at the time of the injection as well as for some time afterwards, together with the formation of nodules in the connective tissue, which are both painful and last for some time, making exertions and physical labor almost impossible; this is more marked after calomel injections than after those with corrosive sublimate, though the former bring about more rapid disappearance of symptoms; ptyalism is not more frequent by this method than by the inunction treatment, and is less so with the sublimate than with calomel, and for that and other reasons he gives the corrosive sublimate the preference. A curious fact is cited that, while the gingivitis from inunctions affects the gums around the upper incisors principally, that of the hypodermic treatment with mercurials seems to affect those of the lower maxillary only. The pain and indurations produced by the subcutaneous injections of both sublimate and calomel soon led to the employment of compounds of mercury, which were to obviate these disadvantages. Arguing from the inference that the corrosive sublimate would be converted by the albuminous fluids of the cellular tissue into an insoluble mercuric albuminate, which, in turn, would be gradually dissolved by the excess of albumen and alkaline chlorides, both Staub and Bamberger were led to originate and employ a soluble albuminate of mercury, which *à priori* would appear a desideratum. However, the results with it were[5] both unsatisfactory in regard to their curative results as well as to the painless administration of the mercurial, and were soon abandoned to give way to Bamberger's mercuric peptonate, which, while claimed to give less pain, appears not to give satisfactory results, as will be seen hereafter.

Other mercurials, such as the mercuric iodide, dissolved in potassium iodide, the mercuric cyanide, the mercuric formamidate, enjoyed an ephemeral popularity and reputation, but fell in disrepute when clinically tested and their results compared with those of calomel or corrosive sublimate. A combination of analgesics (morphine, cocaine) were admixed to their solutions, but rapidly crystallized therefrom as mercuric-alkaloidal-amides.

This brings us to the present decade, and with it a renewed interest in these methods. Though the work of Lewin had been early translated and published in this country, the new mode of treatment has never enjoyed a reputation in American practice, and while syphilographers gave it room in their treatises, they held aloof from committing themselves as to its results or recommending it to their followers. As much may be said of English practitioners, and the teutophobe French would hardly laud the good that came from Berlin. Thus, while Berlin and Vienna injected with excellent results, and piled up their statistics to many thousand cases, they stood alone in its praise. Liebreich in 1883 introduced the mercuric formamidate for hypodermic use, for which it is claimed that it rapidly exhibited its curative effect if injected in doses of from 10 to 20 minims of a one per cent. solution, that it does not often produce ptyalism, and gives rise to little or no pain (*Med. Times and Gazette*, January 6, 1883).

Delpech (*Thèse de Paris*, July, 1883) recommends the ammoniated mercurial peptonate for hypodermic use, which, he says, does not give rise to pain nor produce abscesses, etc. Its action, he claims, is most rapid, and readily reduces the severest lesions, without danger of salivation, in doses of 10 milligrammes (⅙ grain), while it obviates the gastro-intestinal irritation following the internal use of mercurials. Watrazenski, of Warsaw, in 1886 (*Centralblatt f. d. Med. Wissenschaften*), revived the injections of insoluble mercurials, and, after experimenting with calomel for some time, became dissatisfied with them, and proposed the mercuric, and also the mercurous oxides, suspended in water and mucilage, in doses of .06 to .1 gramme (1 to 1½ grains) repeated every six to eight days. Three to five injections like these suffice to bring the symptoms to abeyance. The oxides, according to him, cause little or no pain (?), nor do they produce abscesses, and he thinks the mercurous oxides the milder of the two in their action. Dr. Edward Lang (*Wiener Medizinische Wochenschrift*, Nos. 34 and 35) further introduces a new mercurial for hypodermic medication, which he terms "oleum cinereum," or gray oil. He prepares it in a manner similar to that in which mercurial ointment is made, but uses oils and fats instead of the more solid fats, and of a strength that each cubic centimetre of the twenty per cent. oil contains .23 gramme (four grains) of mercury. Of this he injects about $\frac{1}{10}$ cubic centimetre, and even $\frac{2}{10}$ to $\frac{3}{10}$ cubic centimetre once or twice a week, but often one injection every two weeks suffices, as larger quantities or more frequent repetition may cause ptyalism. He recommends these injections especially in adenitis, when the injections should be made near the glands, as well as in the periosteal gummata of the forehead, when the injections are to be made near their borders.

Kopp and Choten (*Vierteljahreschrift für Dermat. und Syph.*, 1886, 4, ii.) report two hundred and sixty-three cases which they had treated with satisfactory results at Neisser's clinic in Breslau, according to Scarenzio's method, with hypodermic injections of calomel. They made a total number of fifteen hundred and twenty-three injections, and observed among these seventy-two abscesses. They recommended the following formula as the best in their experience:

℞ Hydrarg. chlorid. mit. (vapore parat.), ℈iv;
Sodii chloridi, ℈i;
Aquæ destillatæ, f℥ii. M.

Of this, they claimed four injections, given in two sittings, two weeks apart, were sufficient to abate all symptoms; also that the sodium chloride present caused the formation of some mercuric chloride, thus preventing the formation of lower organisms. With proper cleanliness and the injections made in the gluteal region and the connective tissue thereof, they think its effect as sure, with a minimum of injections needed and cheapness of material, while occasional abscesses, uncertainty of dosage, and relapses are some of the disadvantages.

Dr. Balzer, at the Lourcine Hospital in Paris, experimented largely with the hypodermic injections of calomel, according to the method of Scarenzio and Smirnoff, by making a small number of injections deep into the muscular tissues. He introduced the employment of vaseline oil as excipient, instead of the usual water and glycerin. The formula employed by him is as follows:

℞ Hydrarg. chlorid. mit., .5 gramme (gr. viiss);
Olei vaselinæ, 10 grammes (℥iiss). M.

Dr. Besnier, at his clinics at the Hôpital St. Louis in Paris, approved of these methods as desirable modifications of the internal treatment by mercurials, which too often caused dyspepsia, stomatitis, etc., and often led to grave disappointments. He thought the calomel injections as of greater value than those with sublimate, on account of giving less pain (?) and requiring a smaller number of injections. He thinks the method of Scarenzio far superior, as the calomel is gradually changed into mercuric chloride, and .40 to .50 gramme (6 to 7½ grains) suffice for a cure (?). He notes the occasional occurrences of phlegmons and abscesses and the pain connected with it, but its revival is no doubt due to its manifest good effect. Balzer's employment of vaseline oil as a menstruum he considers a great improvement, but also urges strict sterilization of the calomel and rigid antiseptic precautions. He does not confine his patients to bed for three days, as recommended by others. Twenty-four to forty-eight hours after the injection the inflammatory reaction takes place, and a slight œdematous swelling about the injected calomel, a small nodule, painful to the touch, remains for eight days subsequently. With all due precautions abscesses were not avoided in some of the cases.

The question of hypodermic medication of syphilis with mercurials was the great

point of interest at this time (1887) in the hospitals and medical societies of Paris (Paris letters of the *Journal of Cutaneous and Genito-Urinary Diseases*). Du Castel, at the Hôpital du Midi, used .10 gramme (1½ grains) in vaseline oil for injections carried deep into the muscles of the buttocks at intervals of eight days. Phlegmons and painful nodules appeared at their sites. Martineau, at the Lourcine, still adhered to the ammoniated peptonate of mercury, of which he gives daily injections, and, as he claims, with excellent results, stating that he had made up to that time two hundred thousand injections in six hundred patients.

Dr. Besnier has since his earlier experiments totally renounced the calomel injections, first on account of the often unavoidable abscesses, and also the stomatitis and enterorrhœa occasionally following them. He thinks that only a minimum of the mercuric chloride formed from the calomel proves efficacious, and that the mercurialization, either by calomel or sublimate, is not more rapid than by other methods, and that relapses are as frequent as they are in the older ways of administering mercury. Dr. Maurice, as well as Dr. Hallopeau, have frequently noted abscesses after the use of calomel, as well as after the gray oil of Lang, and they confirmed the negative results of Dr. Besnier. Drs. Vidal and Fournier were also opposed to the injections of insoluble mercurials, as recommended by Scarenzio and Smirnoff on similar grounds.

In this country J. C. Wilson has recently treated syphilis and other manifestations according to these methods and with favorable results. It is only quite recently that Professor J. W. Runeberg, of Helsingfors, raises his voice to call attention to the dangers of mercurialization by injections of calomel (*Deutsche Med. Wochenschrift*, January 3, 1889) after Neumann, of Vienna, has pronounced against them as dangerous to health and life.

It is of interest in connection herewith to note the relative value of different mercurials used in the treatment of syphilis. At the Congress für Innere Medizin at Wiesbaden, 1887, Professor Kaposi led the discussion on the therapeutics for syphilis, and to the question propounded, "What are the respective advantages of the different remedies used in the treatment of syphilis?" the following arrangement by Bockhart as to the permanency of curative result was submitted and generally accepted:

1. Most permanent.
   - *a.* Inunctions with unguentum hydrargyri.
   - *b.* Calomel injections.
   - *c.* Lewin's sublimate injections.
2. Moderately permanent.
   - *a.* Sublimate chloride of sodium injections.
   - *b.* Albuminate and peptonate of mercury injections.
   - *c.* Blood serum mercury injections.
3. Less permanent.
   - *a.* Mercuric cyanide injections.
   - *b.* Glycocholate of mercury injections.
   - *c.* Mercury formamidate injections.

After this cursory review of the ups and downs of the hypodermic use of the various mercurials and some of the literature on the subject, I would venture as a deduction from my own experience with the hypodermic use of mercurials in the treatment of syphilis, that in my hands it has certainly produced many striking results. Under my preceptor, Dr. Julius Kaemmerer, I had, together with my friend, Dr. Rosenthal, an opportunity to practise injections of corrosive sublimate according to Lewin's method, perhaps among the first in this country. As early as 1876 and 1877 these injections were made by us daily, and in doses ranging from ⅛ to ½ grain at a time. In none of these cases, and ever since in many thousand injections of never less than ⅛ grain, frequently increased to ⅓ grain, have I been able to find abscesses resulting. In fact, with our present knowledge and ideas of suppuration I can hardly credit the development of pyogenic bacteria possible in a solution of mercuric chloride of the strength of 1 to 100.

Although I have used for some time for the injections a gold needle fitted to an ordinary hypodermic syringe encased in hard rubber, a steel needle well anointed will answer as well if properly cleaned and changed as often as corrosion will indicate this necessity. The solution employed by me contains 1 part of corrosive sublimate dissolved in 100 parts of distilled water, of which from twelve to twenty minims are injected daily deep under the skin into the connective tissue, in the region of the back, from above and below the scapula, down to the gluteal region, on both sides and on the sides of the chest. In no case were more than twenty-five to thirty injections made successively, and, as a rule, a total disappearance of the manifestations of early syphilis resulted after the tenth

injection. Even late secondary and beginning tertiary cases yielded readily even after other methods of treatment had failed. In all instances the doses were gradually increased until slight gingivitis was experienced, when the amount so injected was diminished until it had disappeared. Enteric or gastric disturbances were only experienced in exceptional cases and when very large doses were exhibited. All of the cases so treated were ambulant and attending to their occupations. Only a small percentage had relapses and had to undergo a second treatment, and only two a third one. An after-treatment with small doses of potassium iodide, 5 grains t. d., or, in place of this, Blanchard's pills of the iodide of iron, followed the injections, and were continued for three months or longer. This is done with a view to inhibit the rapid elimination of mercury following the hypodermic method of soluble mercurials. It is no longer a doubt that the iodides prevent or retard the elimination of mercury ("Ueber den Einfluss des Quecksilbers auf den Syphilitischen Process," by L. v. Vajda, Vienna, 1880), and the fact that the slower the elimination the greater the safety from relapses is now also generally accepted, and accounts for the permanency of the inunction treatment, after which the presence of mercury in the urine has been detected for a long period, and, in some instances, after thirteen years (Vajda, as above).

The injections of sublimate are painful for a short time afterwards, and leave for some days indurations in the subcutaneous cellular tissue, which occasion inconvenience and distress to the patient. The smaller doses do so in a very moderate degree only. The smallest quantity of sublimate used in a complete treatment by me was 3 grains, while in some of the more serious cases 6 to 8 grains had to be administered to that end.

The patients, as a rule, stand the treatment well, and but few desert on account of it. In order to avoid the pain arising from this method of treatment I have successively experimented with most of the various preparations enumerated above. The albuminate and peptonate of Bamberger I have found quite as painful and not as efficacious as the corrosive sublimate, while the calomel and yellow oxide of mercury injections, though, as by Balzer's directions, suspended in vaseline oil, proved less painful at the time of the injection, and were followed with inflammatory conditions of the connective tissue, which proved most distressing to the patient. The calomel injections, in my hands, even with the utmost precautions, were often followed by abscesses. The mercuric oxide is in this and its curative effect much preferable, but the pain it gives rise to and the inflammatory indurations are in no respect less, if not more, than with the former. Much might be said and speculated upon the conversion of the mercurials in the tissues, but after all the corrosive sublimate seems to have the most direct bearing upon the pathological cause of syphilis.

When we take into consideration the rapidity with which it causes the symptoms to disappear, when the small amount of mercury introduced into the system is duly considered, and the relative results obtained by it alongside of other, and especially the internal, methods of administering mercurials, it seems surprising that the hypodermic injections of mercurials have taken such slight hold among us.

There is no doubt that the more rapidly the early symptoms of syphilis are brought to abeyance, the greater the immunity from later and more central lesions. I hold, therefore, that next to, and perhaps even before, the unclean and unprecise inunction method, hypodermic injections of corrosive sublimate are by far the best means to reduce the symptoms, and, I believe, cure syphilis in its early stages. That they are painful there can be no question, but if by them and with the endurance of some pain (which is by no means unbearable) we can accomplish in one month what years of ingestion of mercurials often fail to do, and avoid besides the almost certain impairment of the digestive functions, and prevent later and more central lesions, I think my claim is not overdrawn when I consider the treatment of syphilis by the hypodermic use of mercurials, and especially corrosive sublimate, as the most precise, safe, rapid, and sure of all those heretofore employed.

333 South Twelfth Street.

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## *COCAINE IN LABOR.*

By A. L. Wagner, M.D., South Bend, Ind.

PERHAPS I may be treading already well-known and mapped grounds, but I have been unable to find any mention in the current literature of the use of cocaine in parturition. I have used it in all my cases

since 1885, especially in those cases where I was called in early, and I have used it also in those cases where called late, if there were any reasons to believe that labor would be prolonged.

Reasoning that the pain of labor comes from three sources, and seeing in cocaine a means of annulling one of them, I began its use. The three sources of which I speak are as follows,—the greatest given first: dilatation of the cervix, vagina, and outlet; the dragging and intolerable pain of an unruptured and tough membrane, and the pressure of the uterine muscular fibres on the uterine nerves during a contraction of the uterus.

In those cases where the membranes are prematurely ruptured, or where the os is unnaturally rigid, the pain from dilatation of the cervix is unusually severe and labor is abnormally prolonged. In these cases, as well as in normal labors, cocaine not only annuls the pain, but it also permits or causes a more ready dilatation by paralyzing the circular fibres of the os. My experience has been that, instead of waiting from four to twenty-four hours, by the use of cocaine the labors have been about two hours long,—*i.e.*, from the time of sufficient dilatation of the os to admit the finger, to full dilatation and expulsion of the fœtus. After full dilatation of os but few pains are required to expel the fœtus.

It not only shortens labor, but it annuls the pain to such an extent that the patient, if in sharp pain, soon manifests her freedom from it by remarking that the labor is not progressing as it should, because she feels the pains to be less energetic. This is the only way that the primipara is conscious of the help she has obtained from the use of the drug, but in the multipara after the birth the realization of an easy confinement is apparent, and she is correspondingly grateful to her physician.

In the following case the lady was in her first confinement. I was called at 10 A.M., and found that she had been having light pains, and she wanted to know when she would be confined. I found the os large enough to admit the finger,—*i.e.*, the finger entered the os easily and impinged upon the vertex, and was touched on all sides by the cervical canal,—and told her that it would be some time before labor would terminate. I then went to my office and procured some cocaine suppositories, and called on another parturient, and then returned at eleven, and used a suppository of 2½ grains. By the time I returned pains were somewhat stronger, and, after cocaine was used, she said her pains had almost stopped; but the os had dilated a great deal, and I applied another suppository at 12.10. At 12.45 the os was fully dilated, and she was complaining of a *continuous dragging pain in the back that did not disappear between pains.* This, I aver, is the true index to the time for the artificial rupture of the membranes, regardless of the engagement of the vertex in the brim, or the relative size of the os, or the descent of the child and membranes into the vagina. I therefore ruptured the membranes at this time, and the babe was born the second pain, at 1.3 P.M., making the labor about two and a half hours long.

CASE II.—*June* 6, 1887.—I was called to see Mrs. B., who had been in hard labor since the previous night at 7 P.M. She was attended by a midwife, and, as there seemed to be no progress, the husband desired the attendance of a physician. I found the os about the size of a quarter silver piece, hard and unyielding, the rest of the parturient canal in a very poor condition for childbirth. I used the suppository at 12.30, and in fifteen minutes she said the pains had ceased almost entirely, but at one o'clock the os was twice the size it was at first and much softer. By encouraging her to bear down voluntarily, which she said was useless, as the pains were not as strong as at eight the previous night, the waters broke at 1.30, and then I made use of a hypodermic injection of cocaine into the perineum, or rather on each side near the perineum, and used another suppository. In one-half hour the child was born, with the exclamation from the mother, "Oh, Lord! is it born so soon?" The position of the vertex was the occipito-posterior. Here the anæsthetic annulled the pain, and caused the os and the rest of the canal to dilate, whether from paralysis of sphincter muscular fibre, which Bell says does not exist in the cervix, or from relieving reflex tonic spasm by annulling pain and irritation.

CASE III. was one from which I apprehended much trouble, as she was a very close-built woman, and had been suffering for many months from pyosalpinx, which would fill up and discharge regularly every two months. Besides this, she had been suffering since the first month of pregnancy from angina pectoris, and I feared that the expulsive pains while in childbirth would augment arterial tension, as she had grown gradually worse as pregnancy advanced, and that the angina would

prove fatal, as I had seen several like cases recently recorded. She had had four other children, and said she usually labored from forty-eight to seventy-two hours in terrible pain, hence my misgivings. The second month of pregnancy the left tube emptied itself through the uterus, and I had much trouble in preventing an abortion. And at each successive month till the eighth the os would dilate, pain and hemorrhage would come on, and an abortion would seem imminent, but was gradually overcome. The tube on the left side was enormously distended by the time labor came on, and I was absolutely certain, if labor lasted for any such length of time as she assured me the previous ones had, her chances for suppurative peritonitis and death, from ruptured tube, was very great. On the morning of February 25, at seven o'clock, I was called, and I found that she had had some few transient pains, but the os was not at all dilated, and I gave a small dose of morphine and returned to my office. At 2 P.M. I was again called, and found that the pains had dilated the os to the size of a five-cent nickel. This at 2.30. I then introduced a three-grain suppository, and soon she was complaining of her heart instead of labor-pains. A hypodermic of $\frac{1}{75}$ grain of glonoin relieved her of her anginal pain, and she then began to accuse me of postponing her labor, as the pains were nearly gone.* But in the mean time the head was advancing well, and at four I used another suppository. At 4.50 she had a more severe pain, and the waters broke. At 5.2 the child was born without any help from the mother, except in three or four contractions. The babe was born and cried before she knew it had come, and the lady's mother, whom I told to hand me the tape, asked me what I wanted with it, and would not believe that the child was born till I showed it to her. About the tenth day the tube emptied itself, and the heart-trouble had made but one slight appearance.

In almost all of my cases I have used cocaine, from 2 to $3\frac{1}{2}$ grains, and about one to one and a half hours apart, never using more than two on the same case. After birth I use the regulation antiseptic douche to clear the vagina of the cocaine that may remain. I never have seen any unpleasant results from its use. I have always used it in those cases where the child was presenting a shoulder or arm, and the parturient is placed in the genu pectoral position for relief, with, I think, good results.

102 SOUTH MICHIGAN STREET.

* In the previous threatened abortions I had used opium and viburnum to no purpose, and finally tried the fluid extract of horse-chestnut. With this, I firmly believe, and so did the lady, that we had postponed the labor about twenty-one days. The time of impregnation was limited to coitus indulged in two separate times, about ten days apart, and isolated by three months from any previous or subsequent indulgences.



## *NOTES ON HOANG-NAN.*

BY JOHN V. SHOEMAKER, A.M., M.D.,
PHILADELPHIA, PA.

HOANG-NAN, or hwang-nao, tropical bindweed, is an exogenous plant, native to the mountainous districts of Laos, Anam, and Tonquin. It belongs to the natural order Loganiaceæ, and has been given the botanical title of *Strychnos Gautheriana*, in honor of the Roman Catholic missionary, M. Gauthier, who, in 1874, brought it to the notice of the civilized world. It grows with slender stem, without support, until it reaches the branches of tall trees, around which it twines. Its stem is gray, and its leaves are of a dark-green color. It is found only in spots, and is said to be not very abundant. Its active ingredients, according to the examination of M. Wurtz, are the alkaloids strychnine and brucine, the latter being present in the larger proportion. We have received it in the powdered form, from which a fluid extract and a tincture have been prepared. The natives believe that the bark is most efficacious when protected from the light. Nature accomplishes this purpose by clothing it with a reddish moss. The dose of the fluid extract is from 5 to 30 drops thrice daily, freely diluted with water, and it is best given before meals. It is rapidly absorbed by the stomach. Its elimination I have not particularly studied, but it presumably escapes from the system chiefly by the kidneys and bowels. Its action, I infer, is assisted by the same agents, which act synergistically with nux vomica,—*i.e.*, belladonna, ergot, and electricity. On the other hand, conium, opium, and tobacco should be antagonistic. Physiological antidotes to its toxic results are chloral, bromide of potassium, ether, and chloroform.

I have studied its physiological action upon frogs, rabbits, and dogs. Upon all, in adequate doses, it soon produced severe clonic spasms, which presently assumed a tetanic

character. 30 minims of the fluid extract injected into the jugular of a dog caused general clonic and tetanic spasms, and a rapid and considerable fall of the blood-pressure, beginning twenty seconds after injection. Death occurred in five minutes. The movements of respiration ceased in two minutes, three minutes before failure of the heart's action. 10 minims thrown into the jugular gave rise to general tetanoid convulsions. The arterial pressure began to fall in ten seconds, and continued gradually to sink during the space of a minute. As with the larger dose, respiration was more profoundly affected than the circulation. 5 minims failed to produce convulsions. A slight and temporary decline in the rate of the pulse and the arterial pressure took place directly after the injection, but was succeeded by a slight rise. The temperature was unaffected in rabbits, but was not noted in the dogs. In rabbits the bowels were relaxed, and some blood appeared with the evacuations. No effect was perceived upon the action of the kidneys or of the skin. Clinically, upon the human subject, administered in medicinal doses, I have noticed that hoang-nan has an alterative effect upon the sebaceous glandular system, stimulating their activity if repressed, or restraining it if excessive, at the same time improving the quality of the secretion. It exerts, also, a corrective influence upon the functions of the perspiratory glands.

It is as a general tonic that hoang-nan will find its widest sphere of usefulness. It invigorates the nervous system, and through it the muscular and glandular apparatus, and strengthens the action of the heart. Owing to its chemical composition its remedial effects are very similar to those of nux vomica. It may be appropriately used in the treatment of chronic alcoholism, in order to increase the appetite and digestion, to relieve the tremor and prostration which follow a debauch. In small doses it will allay the nausea due to the same cause, and sustain the heart upon the withdrawal of alcoholic drink from a system long habituated to its use. It may be used in anæmia, in conjunction with iron. It will also frequently prove useful in cases of amenorrhœa. Administered in the intervals between attacks of spasmodic asthma it is calculated to diminish their frequency and severity by improving the innervation of the muscular coat of the bronchioles. It is worthy of trial in tobacco amaurosis. It will probably prove efficacious in the treatment of chorea. It is of value in the treatment of dyspepsia, since it improves the appetite, dispels flatulence, relieves nausea, and promotes the action of the bowels. In small doses I should expect it, like nux vomica, to be a valuable agent in the vomiting of pregnancy. It would be proper, also, to make trial of its effects in idiopathic epilepsy. In its native country it is highly esteemed in the treatment of fevers. It is not unlikely that it may be advantageously employed as a substitute for or an addendum to cinchona, just as the wood and the root of nux vomica are used in the East Indies in cases of malarial fever, and the bark of strychnos pseudo-quina in Brazil as a substitute for cinchona. It is a good tonic in convalescence from typhoid fever. I have employed it in erysipelas without perceiving any marked curative result. It is indicated in all the varieties of neuralgia. In hemiplegia, after the clot has been absorbed, hoang-nan may be given in order to stimulate the motor nerves and the nutrition of the disabled muscles, and in post-paralytic tremor it is likely to prove an excellent remedial agent. It is also applicable to cases of Bell's palsy, to rheumatic, diphtheritic or lead paralysis, and to reflex paraplegia. The natives of Anam and neighboring countries prize it highly as a cure for leprosy. We are not without favorable testimony from European physicians practising in regions where this disease prevails, but I apprehend that, although it may sometimes cause absorption of tubercles in the earlier stage, yet it will be found destitute of any specific curative effect. Whatever good results follow its administration in lepra will rather be due, I think, to its promoting general nutrition. I observed very carefully one case of lepra in which I employed this remedy persistently during three months. The general condition of the patient improved, but I was unable to detect any influence whatever upon the tubercles. It is also of great repute in the East as a remedy against rabies and the bite of venomous serpents. In fact, it was the native reputation of hoang-nan in these last two affections and in leprosy that led M. Gauthier to bring it to the notice of French physicians. I have had no experience with it in hydrophobia or snake-bite, but, judging from what I have observed of its properties, I do not conceive that it will be found to have a specific value. The same virtues have been vainly attributed in the north of India to another species,—the *Strychnos colubrina*. It is a useful drug in neurasthenia, and hence will

prove of service to the gynæcologist and genito-urinary specialist.

I have given hoang-nan with very good results in cases of seborrhœa, particularly of the scalp, in which situation it not infrequently leads to loss of the hair and premature baldness. In alopecia, also, its effects are good, benefiting the growth and health of the hair through its influence upon the circulation and secretions of the skin. In hyperidrosis it is capable of checking the morbid excess of perspiration. In pustular eczema I have witnessed marked improvement from the use of the drug under consideration. This appeared to be especially the case when the disease attacked those parts of the body which are the most plentifully supplied with sebaceous glands, as the face, neck, back, and genitalia. I have derived very good results from hoang-nan in cases of acne. In sycosis, also, its administration has been followed by gratifying improvement. The same remark applies to furuncles and carbuncle, in which it moderates the intensity of the inflammation, and sustains strength and the digestive powers. In scrofulous manifestations it has a marked beneficial effect. Tumified glands diminish in size, and amelioration takes place in cutaneous affections dependent upon the strumous taint. In old cases of syphilis, attended by great general debility, it is often more judicious to suspend the so-called specific medication, and rely, for a time, upon constructive remedies. Ulcerated tubercles and gummata, and the visceral involvements due to syphilis, aggravated by unhygienic surroundings, and by sexual and alcoholic dissipation, not infrequently do better for a time under simple constitutional tonics than an antisyphilitic course. Hoang-nan has been vaunted as a remedy in malignant new formations. This praise, however, I am unable to endorse. It may temporarily serve a good purpose in preserving the appetite and digestion, but I have never seen any indication of its staying the progress of the malady.

To sum up: Hoang-nan has failed to approve itself as a powerful remedy in leprosy, rabies, snake-bite, or cancer, and in fevers it possesses no special efficacy. But it has a wide range of applicability as a roborant. An exhausted state of the nervous system, flaccidity of the muscles, torpor of glandular organs, are remedied by the suitable exhibition of this drug. In medicinal doses it may be maintained for a long while, indefinitely, in fact, with none but the best results.

## *POSITION AFTER DELIVERY AS A CAUSE OF UTERINE DISPLACEMENTS.*

By E. T. Campbell, M.D., Tabor, Iowa.

IS not the custom of requiring a woman, after delivery, to lie on her back the conventional nine or ten days, a frequent cause of uterine displacements?

This is a question which has presented itself to me for some time. I do not recall having seen anything bearing on this subject, and therefore bring it up that possibly some discussion may be called forth.*

Most uterine displacements date from a fall or jar communicated to the pelvis; some from unusual physical exertion at the time of the menstrual flow. Why should the latter prove a cause only at this time? Simply this. The uterus at this time, to fulfil its function, requires and receives an increased blood-supply, and becomes enlarged and congested; the force of gravity is greater, and this, combined with the action of the abdominal muscles, overcomes the resistance of the ligaments, and they give way. More especially is this true in women of relaxed and flabby tissues.

After labor the uterus is enlarged, and, in addition, the round and broad ligaments have been upon the stretch for several months in accommodating themselves to the pregnant uterus, and hence, after the rapid expulsion of the child and consequent reduction in size of the now empty uterus, have not had time to again accommodate themselves to this second change, and are thus incompetent to serve their function.

The supports of the uterus now are slack, and, as the woman lies upon her back, the uterus, being temporarily deprived of its support, from force of gravity falls back upon the sacrum; and as she remains so for ten days, the round ligaments accommodate themselves to this position, and, when the woman gets up, the force of gravity on the contents of the abdomen crowds the fundus still lower into the pelvis, and from now on she is a sufferer from the many ills caused by a retroversion.

True, as in other instances of the disobedience of nature's laws, the more robust escape the punishment which nature has decreed, but the more frail must suffer the punishment.

* Since writing this note my attention has been called to an editorial article on this subject in the Therapeutic Gazette for August, 1889, page 532.

Now, would it not be better, in the after-treatment of puerperal women, to require them to change their position from time to time, and even take the knee-elbow and knee-chest position, say, after the third day, night and morning, in order that the ligaments may have an equal advantage to retract and take in the slack, as it were, as the uterus undergoes subinvolution?

This would prevent the uterus from assuming and retaining any malposition until the ligaments are in a condition to perform their function.

I am convinced that the requiring of a woman to lie upon her back until the round ligaments will no longer do their duty is a gross error, and, if corrected, will deprive the many gynæcologists of the majority of their practice and lessen the necessity for Alexander's operation.

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## *A CASE OF MANIA TRANSITORIA.*

By J. M. Bell, M.D., Murphy, Cherokee Co., N. C.

IN the *University Medical Magazine*, vol. i., No. 1, in the article "Thoughts concerning the Symptomatology of Insanity" the author uses the following language: "The drift of modern science is to show that there is in the brain a more or less complete differentiation of function, and it is most probable that one set of nerve-cells is connected with emotion and another set with intellectual thought, so that the excitation of one set of cells produces an explosion of nerve-force, taking the form which we know as anger, and the excitation of another set of cells causes a paroxysm of fear or love, while the result of the action of still another set of cells is the development of ideas. If an influence so affects the intellectual cells of the brain to-day as to pervert their function, intellectual insanity results. To-morrow, the same influence transferred to the emotional cells, may cause an emotional insanity."

These remarks recall to my mind a very strange case which occurred in my practice some years ago. John Williams, a farmer, and an upright and respected citizen, aged about 45, had been troubled for some time with chronic diarrhœa, and was quite thin. In the middle of a very hot day in July he walked out into his field, as he was in the habit of doing, to see his hands at work. About midnight following he called up his wife and a young man, who was visiting him, told them he was going to die, and requested the young man to write his will. Page after page was dictated, written, and read to him, the man appearing as rational as usual. As morning approached he became threatening and very talkative. I visited him about noon, and found him lying on his back, with his legs drawn up, and swaying to and fro from side to side. He kept his arms revolving around each other, and was talking so rapidly and incessantly as to froth at the mouth. He seemed to be perfectly conscious, recognizing and speaking to every visitor, of whom there were some twenty-five or thirty of his neighbors, changing, without halting, his language and address with every new-comer.

The strange feature of the case was, that although he talked so rapidly and unceasingly, using language wholly original, slanderous, and entirely devoid of truth, his sentences were short and in rhymes. Occasionally he would sing, using the same language, short sentences, and rhymes. His language was similar to this:

> Good-morning, Dr. Jones,
> You look like a stack of bones;
> God told you I was sick,
> And sent you here quick;
> He said if I didn't get well,
> He'd send me down to h—ll!

He scarcely ever missed a rhyme, and when he did he seemed not to know it, and never faltered. Such had been his condition since the early morning, and in this condition he continued for over eighteen hours. Under the influence of large and repeated doses of opium, he gradually became less voluble, and by next morning talked more slowly. The succeeding night he slept a little, and continued to improve, and in a week was as well as usual, but remembered nothing that he had said.

Upon questioning his wife and acquaintances, I was told that he had no regard for poetry, was never known to try to make rhymes, or even to make an effort to sing, nor was he in the habit of using bad language.

I am no believer in phrenology, but do not see how to account for his *ex tempore* poetical and musical success unless there be some part of the brain presiding over this faculty, which, in his case, was under a high degree of stimulation. Was not the case of blind Tom, the idiot but musical prodigy, a similar one, except that Tom's musical faculty was abnormally but permanently developed at the expense of all other faculties?

## *NOTES ON A CASE ILLUSTRATING THE DURATION OF THE CONTAGION IN SCARLET FEVER.*

By H. C. Wood, M.D., Philadelphia, Pa.

IT is a question of such practical importance to determine how late the poison remains in the human system after an attack of acute exanthematous disease, and how long it is possible for an ex-patient to give the disorder, that we put upon record the following case, which occurred in the family of a well-known physician, and the details of which can, therefore, be absolutely relied upon.

One child was taken sick on Friday, April 19, 1889, with sore throat, followed the same evening by the eruption of scarlatina. The same night the child was isolated, and the other children of the family were sent entirely away from the city house. The case ran the ordinary course of a mild attack of scarlet fever, and the children were kept apart till June 1,—*i.e.*, forty-two days after the first outbreak. On June 15, two weeks after the meeting of the children in an isolated country house, a second child was seized with scarlatina. This second child had not been in the original house, the seat of infection, since removal, but had slept with his brother the night of June 1. There had, also, been no intercourse between the family at home and the children between the dates mentioned. The clothes of the first child had all been destroyed, and there seems to be no possible explanation for the second child being attacked excepting on the theory that the fever originated *de novo* in the country at a place where there was no scarlet fever, or else that the first child imparted it to the second forty-two days after the commencement of the disease. It should also be stated that the first child had been repeatedly bathed during convalescence.

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## *NITROGLYCERIN IN THE TREATMENT OF ARTERIO-SCLEROSIS.*

In a recent work on the diseases of the heart and blood-vessels, Dr. H. Huchard lays stress upon the importance of modifications in arterial tension as a cause and a symptom of disease. Contrary to what is generally believed, Dr. Huchard claims that the increased arterial tension, which is always met with at the outset of arterial sclerosis, whether generalized or localized, is the cause and not the effect of this affection, since it precedes, instead of following, direct pathological change. As a consequence, it is evident that the indication is to combat this exaggerated blood-pressure by drugs which will reduce blood-pressure, and which will cause dilatation of the arteries. Among these may be mentioned the nitrites, nitroglycerin, and the iodides, and, perhaps, also, as suggested by Liegeois, veratrum viride. In addition, the diet should be regulated principally in restricting nitrogeneous foods, and should be largely confined to vegetable matters.

As regards nitroglycerin, Dr. Huchard, in the *Revue Générale de Clinique et de Thérapeutique* for August 8, 1889, writes that the danger of nitroglycerin producing methæmoglobin has been greatly exaggerated, and Dr. Huchard claims that methæmoglobin never appears in the urine of animals poisoned by nitroglycerin. Dr. Huchard further alludes in this connection to the paper of Dr. Ferreira on the uses of nitroglycerin in cardiac and renal arterio-sclerosis. His memoir is based upon seven cases, all of which were highly benefited by the use of nitroglycerin. Dr. Huchard further believes that nitroglycerin may be regarded as a substitute for the iodides, and possesses the advantage over the iodides in that, while the latter reduces arterial tension, they likewise depress the nutrition of the vascular walls, while nitroglycerin depresses blood-pressure without affecting the walls of the blood-vessels.

Dr. Huchard states that the daily dose of 20 drops of one per cent. alcoholic solution of nitroglycerin should never be exceeded. Even this dose is ordinarily too much; even 10 to 20 drops may produce severe supra-orbital headache. Ordinarily, not more than 2 or 3 drops should be given at one dose, while the average dose, when the drug is administered for several months at a time, should be from 6 to 8 drops daily. In the treatment of angina pectoris, aortitis, dilatation of the arteries, interstitial nephritis, etc., Dr. Huchard's custom is to give the iodides for twenty days in each month, and nitroglycerin in the ten remaining days. In cases where a rapid effect is desired, such, for example, as severe attacks of angina pectoris, Dr. Huchard has recourse to hypodermic injections of nitroglycerin; or, when it is desired to augment the vaso-dilator properties of the iodides, nitroglycerin may be combined with them. Further, Dr. Huchard claims that the iodides may actually cure arterial sclerosis, and prevent angina pectoris, when given in doses of from 45 to 60 grains daily for three or four years, taking care to suspend its use for eight to ten days each month.

# The Therapeutic Gazette

EDITED BY
HORATIO C. WOOD, M.D.,
AND
ROBERT MEADE SMITH, M.D.,
PHILADELPHIA.

GEO. S. DAVIS,
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## Leading Articles.

### *SWITZERLAND AS A HEALTH RESORT.*

THERE are in these United States, as well as in other civilized countries, hundreds of men, free from disease, or, it may be, even in robust health, who, at the end of winter's work, find themselves nervously exhausted from the strain of unremitting labor, and with muscles soft and fat-laden, or, at least, with tissues and emunctories clogged up, because, from indolence or sheer lack of time or power after a successive day's labor, they have neglected exercise, and who needs must look about them for some way or place to renew their wasted energies. For such as these, after much experience, we are convinced that the wilderness—either the Rocky Mountains, or the canoe wilderness of Maine, or other "North Woods"—offers the best possible opportunities, provided that the individual has such love of nature or such contempt for the soft things of modern civilization as not to mind the rough fare, hard beds of ground or bough, multitudinous assaults of insects, and the various other annoyances which certainly do abound in that northern region, which, notwithstanding these drawbacks, often seems to be nigh to the gates of Paradise when August's sunshine glimmers over lake and forest, or November's pencil touches the hard-wood trees with celestial glories.

Man, however, likes variety, and the most enthusiastic woodman may well spend some summers elsewhere than in his favorite haunts. Moreover, there are many by whom good meals, comfortable beds, and secure smoke-free protection from rain and storm are thought to be essential. For such as these to-day we sing the praises of Switzerland. A trite theme it may be thought, but, in fact, one which in truth is not so trite as in the seeming.

Hundreds of Americans haunt Switzerland, but very few seem able to understand it,—to get out the sweetness and the glory there is in it, and to bring themselves into such intimate contact with its mountains and valleys, that, like Antæus, from mother earth they shall draw renewed strength for life's conflicts. The great tourist tide flows in rapid current through the hotels of Geneva, Lucerne, and Interlaken, sends off a few streamlets of carriages to Grindelwald and Lauterbrunnen, mayhap a solitary horseman to Zermatt, or even over the Grimsel, and returns to the shores of America, its individual units each happy in the delusion that Switzerland has been achieved, few, if any, of them distinctly renovated, unless it be the women, for, to many American women, even to roll along a Swiss mountain boulevard in soft cushions seems to be exercise compared with the physical quietude of home.

The first contention of this editorial is, that such seeing of Switzerland as is typically American is not much better than Mark Twain's plan of climbing mountains or viewing the world by proxy: that for men a *foot tour;* for women, either a foot tour or a *horseback tour* is the only proper way of using Switzerland as a health resort, or of getting close enough to it to appreciate its beauty and grandeur.

The famous "Oertelischen Kur" has, as every one knows, exercise by mountain-climbing as its basis. Our Swiss cure is little more than this Oertelischen cure, made interesting and æsthetic, on the one hand, and, on the other, stripped of its dietary restrictions, which are, after all, only required in the severest cases, and which can in a measure be carried out even in a general walking tour such as we are speaking of. Innumerable gouty individuals receive yearly relief by the enforced hygiene and

the depurative waters of the various European spas. Not a few of them, we believe, would get more permanent benefit in Switzerland, where exercise would not only remove effete material and depurate the system, but build up new tissue, so that renewed strength, and not merely tissue purity, would be achieved. It must be, however, always borne in mind that the desired goal can only be reached by hard, continuous work,—work severe enough to cause free, persistent sweating, and continued for hours in succession until it produces tired, aching limbs, and, at least in the beginning, almost physical exhaustion.

The second and chief object of the editorial is to show how this cure can be carried out in sufficient detail, for any one, by means of a Baedeker, to reach at once the outgrowth of knowledge usually acquired at considerable expense in money and time.

The cost of a walking tour through Switzerland varies with the taste and self-indulgence of the walker. It is, however, not necessary to spend more than two dollars and a half a day, even if wine of the cheaper sort be freely used and first-class hotels patronized. Three dollars a day is a sufficient allowance for any but the most extravagant individuals; while to one who speaks some German and is very careful, it is possible to get through easily on two dollars a day, and we have known Americans accomplish it on less. It is one of the advantages of Switzerland that the smallest, second-class, wayside inn has clean, comfortable beds, sweet bread and butter, and meats which are usually tender, although they may be confined to trout and the flesh of the kid. At least this is true of the Bernese Oberland. In Catholic Switzerland, the Valley of the Rhine, and south of it, we have seen sour bread in the largest hotels.

Our estimate of cost is based upon the supposition that no riding of any kind is indulged in and no guides employed. If the folly of high mountain-climbing be entered upon, the expense may readily mount up to fifty or more dollars in some difficult ascents, where several guides and porters are required.

When time is plentiful, much expense may be saved by making a few days stay at a place, using it as a basis for excursions, provided that at arrival a bargain is struck with the landlord to keep the party *en pension*,—that is, at a fixed rate per day without any extra charges. The minimum period of stay for which this arrangement can be made for a single individual is usually five days, but when there are several persons in the party, very few Swiss landlords or landladies will refuse a three days' *pension*, if the terrors of departure of the party are skilfully dangled before them.

The postal service of Switzerland is so organized that, at an almost nominal expense, baggage, even great trunks, can be sent from place to place with certainty as to time of arrival. Therefore the walker should have a double outfit,—one very scant, which he carries with him, and one which he sends by mail, and uses as a sort of portable storehouse to draw upon.

Only essentials should be carried in the knapsack, and, according to our thinking, these are a waterproof coat, night-shirt, soap, tooth-brush, pocket-comb, and heavy underwear, to be put on in the evening after the wash, which ought to follow the day's exercise. Changes of underclothing, of course, should be in the valise.

It is essential that the shoes be sufficiently large to allow a felt sole to be put inside of them, and that the leather sole be at least three-quarters of an inch thick and well hob-nailed. Unexperienced tourists are apt to have the hob-nails driven into an ordinary sole, with the almost inevitable result of sore feet from the pressure of the nail-head through the sole.

Each European spa has its regulation period for a cure, and the Swiss mountain-cure should not be less honored. It differs, however, from that of the spa in that it cannot be so prolonged as to do injury, so that it is the minimum length that we speak of. This we would fix at four weeks, although a more permanent effect can undoubtedly be obtained by a six weeks' stay, and, if four weeks cannot be afforded, much can be gained by an industrious use of three weeks. The tour which is indicated in the following paragraphs can be readily gone over in three weeks, or prolonged to five, according to the stay made at certain indicated points, and, if the pedestrian has unoccupied time still left, he can add a walk over one of the passes into the Italian Alps and among the lakes of that far-famed district.

It should be further added, that the present tour is so laid out as not only to include almost everything in Switzerland, except the Engadine and Eggishorn, and, perhaps, Righi and the Pilatus, worthy of visit, but also that it is possible for ladies to accompany upon horseback the walkers.

Of all the larger cities of Switzerland, the only one which has preserved its mediæval characteristics sufficiently to interest greatly the traveller is Berne. To appreciate its charms, however, it is essential not to go with the common crowd of tourists into the large hotels in the newer parts of the town, but to haunt one of the old houses built some hundreds of years since by bishop or guild, and now used as hostelries frequented by Swiss, German, and other knowing persons.

Of these old guild-houses we can especially recommend the Hotel Fancon, or the smaller Pension Herter, the latter being the more unpretending, but cheaper and scarcely less inviting.

We will now suppose that from Paris our tourist reaches Berne; thence by well-travelled routes he proceeds to Goeschenen, at the mouth of the St. Gothard tunnel, and begins his pedestrian labors by an hour's walking through the wonderful Goeschenen defile over the Devil's Bridge to Andermatt. This village is worthy of a stay of three days, the first day being devoted to a walk over the Oberalp Pass to Chiamut (seven miles), or even to Sedrun (fourteen miles) and back; the second day to an excursion to the summit of the St. Gothard Pass; the third to loafing. From Andermatt the valise should be sent to Grindelwald or Lauterbrunnen.

Leaving Andermatt, the first day may take the tourist to the top of the Furca Pass; the second over the summit of the Furcahorn (to be omitted if time is short) to the Rhone Glacier Hotel. From this by a five-hours' walk he reaches the top of the Grimsel Pass, and an afternoon's rest. From Grimsel his feet carry him to Meiringen; from Meiringen it is a very hard day's work over the Great or Hasli Scheidegg to Grindelwald. The Valley of the Rosenlau, through which the path leads, is most beautiful, and most pedestrians will, we think, consult pleasure as well as comfort by spending a night on this route, either at the large hotel of the baths of Rosenlain or the Pension zum Schwartzwaldgletscher, more conveniently situated higher up the mountain. If the traveller be not pressed for time, instead of proceeding at once from this resting-place, he may make the ascent of the Faulhorn, which is very highly spoken of, and will afford another day of honest work. Indeed, the Rosenlau hotel may well be used as the centre of excursions for several days.

Grindelwald is worthy of a three days' stay, so that its glaciers may be studied and weary limbs be recuperated, or the traveller may at once press on over the Wengernalp to Lauterbrunnen, taking his midday meal at the Hotel Jungfrau, with the Jungfrau Mountain rising in eternal, dazzling whiteness immediately before him.

Two days are essential for Lauterbrunnen. The first day to enjoy the beauties of the place and to visit the Falls of Trümmelbach (one and a half hours' walk each way), to us the most extraordinary in Switzerland. The second day should be given to an excursion to Mürren and the Fall of the Schmadribach, and here the hotels of Mürren offer themselves most invitingly for a day's rest.

From Lauterbrunnen it is a short walk to Interlaken; thence by railroad direct to Spiez; or preferably to Thun, as this city is well worthy a short visit, and it is a beautiful ride in the boat from it across the lake to Spiez. From Spiez it is a day's walk to Kandersteg, and here may we venture to commend the Bär Hotel, with its most gushing of landlords. A day or two may be well spent here, especially in an excursion to the Œschinen Thal. Then, by a hard day's walk over the Gemmi Pass, Leuk Station is reached. If time do not press, this course may very well be broken at Leuk Bad, and a half day given to a visit to the Cliff Ladders.

From Leuk the railroad carries one in a couple of hours to Visp; thence is a good day's walk by Stalden through the beautiful Saas Thal to Saas Fèe, a place not frequented by Americans, but one of the most beautiful in Switzerland, and one, from its great elevation (about six thousand feet), into which European hay-fever patients retreat with a security of relief. Three or more days may be spent in excursions from this point, especially should Mattmark and the summit of the Moro Pass be visited.

From Saas Fèe, with guides, one of the high passes may be crossed to Zermatt, or the less ambitious pedestrian can reach that place by a hard day's work spent in retracing his steps to Stalden, and going thence by St. Nicholas and Zermatt. Three days at least are required for the more simple excursions from Zermatt, especially to the Gorner Grat, which affords probably the finest view that can be reached in Switzerland without perilous climbing. Zermatt, as well as Saas Fèe, is a great centre for high mountain-climbing, and may readily be made the basis for a month's enjoyment of this dangerous pastime.

Returning from Zermatt to Visp, the railroad takes the tourist to Martigny; thence, by an eight- or nine-hours' walk over the Tête Noire, he reaches Chamonix. Here, after some days of excursion, our pedestrian can go by diligence to Geneva, or walk over the Col de Balme (ten hours) to Martigny, and thence by rail. If time allow, from Martigny it is very easy to reach the Eggishorn; but for details of this route the reader is referred to guide-books, as the four or six weeks' Switzerland cure may well be considered as ending at the second visit to Martigny.

At least two days are required for Lauterbrunnen. The first should be devoted to the place itself and to a visit to the Falls.

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## *SOME NEW RESEARCHES ON HYOSCINE.*

IN spite of the length of time during which hyoscine has been before the profession, its position does not yet seem to be well established. In looking through the numerous communications which have appeared on this subject, one is struck at the great discordance of the results, not only as to its activity as a hypnotic and the danger of producing poisoning, but especially as to the variation of the size of the dose employed. Consequently, no conclusions can be drawn from such observation other than that the difference in the results attributed to hyoscine is due to the fact that different authors have employed different drugs. This position is strengthened by a paper published by Drs. Malfilate and Lemoine in the *Gazette Médicale de Paris* for September 7, 1889, in which they state that the results which they have recently obtained from the administration of hyoscine differed in many respects from those which followed their earlier studies on this subject. The authors, therefore, believe that the hyoscine at present on the market is more pure, or, at any rate, subject to less variation in its composition, than that which was furnished a year ago.

With the object of studying the hypnotic value of hyoscine, these authors have administered the hydrochlorate of hyoscine in hypodermic injections to sixty-two patients, employing in all three hundred and sixteen different injections. In fifty-six instances the patients were affected with mania, the majority suffering from insomnia. Many of these were refractory to morphine and chloral, associated with bromides and hyoscyamine. Thirty-eight of these cases, or sixty-seven per cent., under the influence of an injection of $\frac{1}{210}$ of a grain, slept for five or six hours, or sometimes even longer. Of thirty-eight patients who had been favorably influenced by the first dose, in nearly all the results obtained by these injections continued during two weeks without any increase of the dose; in others the effect became less and less marked, until, after successive increase of the quantity given, the dose finally, in two cases amounted to $\frac{1}{40}$ of a grain; and, although with this dose the effects were well marked, the sleep produced was of a shorter duration than followed the original injection of $\frac{1}{210}$ of a grain. In other cases the dose was rapidly increased to as much as $\frac{1}{80}$ of a grain. Although the authors have never exceeded doses of $\frac{1}{40}$ of a grain, they believe that if larger quantities were given, sleep would not be produced, but symptoms of poisoning would appear. In a certain number of cases, in addition to the hypnotic effect, there was considerable reduction of the degree of excitement, an effect which lasted from twenty-four to forty hours, and in some cases was present for three weeks after the suppression of the use of hyoscine. In other cases, on the other hand, the hypnotic effect was always preceded by more or less marked agitation, which especially took the direction of a destructive tendency. In eighteen cases no hypnotic effect followed a dose of $\frac{1}{210}$ of a grain, and, in fact, the patient's condition seemed to be made worse by its administration. In twelve others five were put to sleep with a dose of $\frac{1}{122}$ of a grain, four with $\frac{1}{80}$ of a grain, and three with $\frac{1}{61}$ of a grain. In these latter cases the hypnotic effect was maintained without any notable increase in the dose. Of the sixty-two patients treated with hyoscine, with the object of producing sleep, in nine cases of general paralysis and cerebral syphilis $\frac{1}{122}$ of a grain produced sleep lasting from four to seven hours in five. A patient suffering from general pseudo-alcoholic paralysis was, in fact, refractory to a dose of $\frac{1}{120}$ of a grain, while 30 grains of chloral caused him to sleep thirty-six hours. The authors have further noticed that dilatation of the pupil was usually wanting, and even when it was present it always disappeared by the next day. In patients capable of detailing their feelings, there were noted trouble in accommodation, diplopia, and a certain degree of paresis of the limbs. In a case of melancholia and tuberculosis no effect

was produced by $\frac{1}{125}$ of a grain, while $\frac{1}{64}$ of a grain produced ocular disturbance.

The authors state that they have never noticed the dryness of the throat and diminution of the salivary secretion so frequently noted by other observers. In fact, two cases complained of excessive salivation. Headache or illusions were not complained of in any instances, and even when injections were made previous to or immediately after eating, there was no disturbance of digestion. The authors, likewise, believe that very minute doses have a certain amount of stimulating effect, and have been employed with this object in view in cases of melancholia and hypochondria, with marked improvement of the patient's condition. In this connection we may mention that, according to the Paris correspondent of the *British Medical Journal* for September 28, 1889, M. Magnan, who has lately tested hydrochlorate of hyoscine in his wards, finds that a dose of $\frac{1}{64}$ of a grain in five minutes renders the patient calm; he appears as if slightly intoxicated by alcohol, his feet seem rooted to the ground, he ceases talking. This drug is valuable in the treatment of insanity; under its influence lunatics become calm, and this condition is not transitory. In delirium tremens it induces healthy sleep. A child of 13, suffering from tic, under its influence was cured of the spasmodic movements. A hysterical patient, suffering from profuse perspiration of the hands and arms, was entirely relieved by means of an injection of $\frac{1}{120}$ of a grain; the perspiration was arrested in two minutes.

On the other hand, Drs. Coleman and Taylor (*Lancet*, October 12, 1889) appear to have obtained the most satisfactory results from the use of what appears to us to be excessively large doses of hyoscine. Nine cases of excessive mental excitement are reported in which doses varying from $\frac{1}{100}$ to $\frac{1}{80}$ of a grain of hyoscine were administered subcutaneously, and in no one of these instances is there any note of any disastrous effect being produced. While, on the other hand, two cases are reported in which a dose of $\frac{1}{125}$ of a grain produced excessive dryness of the mouth, dimness of sight, and delirium, without having any effect on the muscular system of spastic paraplegia due to myelitis, in the other case, a dose of $\frac{1}{63}$ of a grain was without influence on epilepsy, but produced great restlessness, as well as dilatation of the pupil, and paralysis of accommodation. These cases illustrate the remark made at the commencement of this article as to the unreliability of the different preparations being the most probable explanation of the discrepancy of results attained by different observers through the use of this drug.

In his inaugural dissertation presented to the medical faculty of Strasburg, Dr. August Schleussner reports eighteen cases of various forms of insanity in which hyoscine was used as a hypnotic. Five hundred and seventeen separate injections were employed; of these, in four hundred and seventeen the result was stated to be extremely satisfactory, in seventy-three moderately successful, and in twenty-seven no action was noted, thus giving a percentage of successful cases of 80.7 per cent., 14.1 per cent. of moderate successes, and 5.2 per cent. of failures. Experiments with chloral showed a satisfactory result in sixty-seven and a half per cent., moderately successful in twelve and a half per cent., complete failure in twenty per cent. With paraldehyde the results showed seventy-five per cent. of success and twenty-five per cent. of failure. Dr. Schleussner's tables further show that doses of $\frac{1}{220}$ of a grain are usually unreliable. In fourteen cases in which this dose was employed, in five cases a satisfactory sleep was obtained, in six the sleep was disturbed, and in three no influence was produced. With gradually increasing doses the action was somewhat better; with $\frac{1}{160}$ of a grain in sixty-nine cases, in fifty-six the result was satisfactory, in eleven moderate, and in two without effect. In the employment of $\frac{1}{128}$ of a grain in two hundred and seventy-seven cases, the effects were good in two hundred and forty-four, in twenty-five there was moderate success, and in eight there was failure. With a dose of $\frac{1}{100}$ of a grain in fifty-six cases, the effects were good in forty-one, moderate in thirteen, and a failure in two. With $\frac{1}{90}$ of a grain in thirty-eight cases, the effects were good in twenty-nine, moderate in eight, and there was failure in one. With $\frac{1}{80}$ of a grain in thirty cases, effects were good in twenty-six, moderate in three, and without success in one. With $\frac{1}{70}$ of a grain, out of sixteen cases there were nine successes, two moderately successful, and in four it was without action, while, finally, in doses of $\frac{1}{64}$ of a grain, in fourteen cases there were seven successes, two moderately successful, and five failures. It, therefore, seems that moderate doses of about $\frac{1}{100}$ of a grain are most reliable, and only when these doses fail to give sleep should the amount given be increased. The author found that usually

the hypnotic effect of hyoscine was evident in fifteen minutes or half an hour after the injection, while the sleep produced is quiet, deep, and lasts ordinarily from five to seven hours. No effect on the respiration was noted. The pulse was sometimes slightly accelerated, at other times even somewhat slow. Most of the patients complained that the injections were somewhat painful, but in no case was an abscess produced. In employing it through the mouth somewhat larger doses are required than when given subcutaneously, but in general the results were found to be the same. No disturbance of digestion was noted or any unpleasant after-effects.

The author confirms the general opinion as to the value of this remedy, stating that it is a hypnotic of the highest worth, and that it will seldom fail to produce sleep in cases of insomnia; while on account of the moderate-sized doses required, and the fact that no ordinary dose had produced any bad after-effect, and that it is free from disagreeable taste and odor, and that it may be used either subcutaneously or by the mouth, are additional recommendations for the use of this hypnotic.

Finally, some experiments with hyoscine, prepared by Ladenburg, have been undertaken by Messrs. Magnan and Lefort (*Practitioner*, September, 1889). They find that in doses of $\frac{1}{60}$ of a grain it produces excellent results in acute mania in five minutes after ingestion. The patient loses his morbid activity and grows silent, then mydriasis and loss of power of accommodation follow, and the patient goes to sleep for five or six hours without further inconvenience. It has also been used successfully in delirium tremens and in severe local spasms in a child. In view, however, of the facts pointed out by Dr. Mitchell Bruce (*Practitioner*, xxxvii. p. 321), that doses of $\frac{1}{100}$ of a grain may produce symptoms of failure of the heart and Cheyne-Stokes breathing, it may be mentioned that M. Laborde finds that doses of one-tenth the quantity used by Messrs. Magnan and Lefort are sufficient for the purpose.

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### *CHLORALAMIDE IN CHOREA.*

IN addition to its value as a hypnotic, which now seems to be tolerably well established, chloralamide is claimed to be an almost invaluable specific in the treatment of chorea, though, it must be admitted, that this claim is based upon as yet insufficient premises. Nevertheless, the cases reported by Dr. Alt (*Wiener Medizinische Blätter*, September 12, 1889) certainly are very striking. The first of these was that of a boy, 11 years of age, who, after five days' treatment with 15 grains of chloralamide, administered three times daily, was almost absolutely cured of a severe case of chorea. This was also the case with a girl who had been unsuccessfully treated for fourteen weeks with arsenic. She was cured, likewise, after eight days' use of chloralamide. Dr. Alt, also, confirms the almost unanimous testimony as to the value of chloralamide as a hypnotic, especially in cases of simple insomnia, where sleep is produced without any influence upon the circulation, respiration, or digestion, and with but insignificant after-effects.

In the *Pharmaceutical Journal and Transactions* for September 27, 1889, Mr. R. Caswell Harrison adds the following notes as to the pharmacology of chloralamide. He states that, while the solubility is stated to be 1 in 9 parts of water, that he has failed to dissolve 20 grains in 240 fluid-grains of water, the actual solubility being about 1 in 14

On heating in a dry test-tube, it melts, and gives a strong smell of chloral, which condenses on the sides of the tube; and on further heating, chars, and gives a peculiar smell, recalling HCN and onions. Heated with solution of potash, it gives off a smell of chloroform and ammonia. $H_2SO_4$, $HNO_3$, $HC_1$, and $Fe_2C_{16}$, respectively, have no apparent action in the cold. On adding a few grains to a mixture of half an ounce of strong sulphuric acid and four drops of ninety per cent. carbolic acid, and warming, the mixture boils almost immediately, and quickly changes to a bright red color, with a strong chloral odor. This test will distinguish it from most of the new synthetical products, if applied as above, the reactions being shown by the following table:

| Antipyrin. | Antifebrin. | Chloralamide. | Phenacetin. | Sulphonal. |
|---|---|---|---|---|
| No effect. | No effect. | Bright red color, with chloral odor. | Dark purplish brown, with strong aceto odor. | Bright emerald green, immediately changing to dark dirty green, with strong sulphurous odor. |

Chloralamide does not reduce Fehling's solution or decolorize Pavy's.

### *THE PHYSIOLOGICAL ACTION OF EXALGINE.*

IN the *Bulletin Général de Thérapeutique*, September 15, 1889, Dr. Gaudineau publishes an elaborate essay on the physiological, chemical, and therapeutical properties of methylacetanilide, or exalgine, the new hypnotic recently described in several numbers of the THERAPEUTIC GAZETTE. The author formulates his conclusions as to the physiological action of exalgine as follows:

*First.*—As exalgine is an aromatic derivative, it has no marked toxic properties, and is capable of influencing the sensory and motor nervous systems, and of affecting the respiratory and circulatory organs. In poisonous doses, like other poisons of its class, its principal action is on the red blood-corpuscle, diminishing the energy of gaseous interchange into the blood.

*Second.*—Exalgine produces death in doses of 7 grains for every two pounds of body weight of the animal.

*Third.*—In lethal doses, convulsions are produced, and death is rapidly produced by asphyxia.

*Fourth.*—In poisonous but not fatal doses of 3 grains for every two pounds of body weight, the temperature is reduced rapidly for several successive hours.

*Fifth.*—In a healthy man, doses of from 4 to 6 grains produced no effect beyond slight vertigo and ringing in the ears.

*Sixth.*—The primary action of exalgine is on sensibility; its action on thermo-genesis is secondary.

As to the clinical application of exalgine, Dr. Gaudineau formulates his conclusions as follows:

*First.*—Exalgine, given in doses of from 3 to 6 grains, if the subject is non-febrile, is ordinarily without effect.

*Second.*—Doses of 4 to 6 or 12 grains modify considerably the pain experienced by a patient suffering from neuralgia or any painful affection.

*Third.*—Exalgine is poisonous when administered in doses equivalent to 7 grains for every two pounds of body weight, so that in ordinary therapeutic doses it may be stated to be absolutely inoffensive, and that this new remedy is less dangerous than aconitine, digitaline, and all the alkaloids frequently given to patients.

*Fourth.*—The therapeutic dose varies from 4 to 12 grains administered in the twenty-four hours.

*Fifth.*—In these doses exalgine has never produced any other trouble other than slight vertigo and ringing in the ears.

*Sixth.*—Exalgine is especially valuable, from the fact that it does not irritate the stomach, and that the doses required are small.

The analgesic effects of exalgine are especially evident in the treatment of neuralgia, and, to a less reliable degree, in the treatment of pains of a rheumatic character. Finally, while exalgine is but little soluble in cold water, it readily dissolves in solutions containing diluted alcohol, though it is easier to administer in powder or in some solution flavored with some aromatic.

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### *THE DIURETIC ACTION OF THE CHIMAPHILA UMBELLATA.*

DR. ABET publishes in the *Bulletin Général de Thérapeutique* for July 30, 1889, a comprehensive study of the botanical, chemical, and pharmacological properties of the *Chimaphila umbellata*. This plant belongs to the family of the Ericaceæ, and, according to the analysis of Fairbank, made in 1860, its leaves contain gum, starch, sugar, tannic acid, resin, fatty matters, chlorophyl, cellulose, and a yellowish, crystalline matter, which he called *chimaphiline*. This principle was obtained by treating an alcoholic tincture with chloroform. It is insoluble in water, soluble in alcohol, ether, and chloroform, fixed and volatile oils. It has a neutral reaction. Beshore also obtained the crystalline principle by boiling in petroleum ether. The crystals melt at 236°. They are soluble in ninety per cent. alcohol, ether, benzol, and chloroform, and form compounds with bromine. The substance is insipid and inodorous. Dr. Abet has apparently been unable to add anything to this imperfect analysis. He, however, states that the diuretic principle he believes must be of a nature somewhat similar to arbutin, but as yet he has failed in extracting it. He has experimented with a number of different preparations of this plant, and abandoned them all except the soft alcoholic watery extract, this preparation being free from the disagreeable taste and irritating properties of the other preparations. He states that he has employed this alcoholic extract, in doses of from 120 to 225 grains, given dissolved in water, with a little rum and orange syrup. He has experimented on eleven cases of heart-disease where there was

reduction in the amount of urine, where there was dyspnœa, and more or less œdema.

He states that in all these cases there was marked increase in the activity of the kidneys from the second day of treatment, and that this condition was maintained until there was complete disappearance of the œdema. The drug is stated, however, to have no action upon the heart; therefore, if Dr. Abet's statements are correct, it must be regarded as a renal diuretic.

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### *ELIMINATION OF SALICYLIC ACID BY THE KIDNEYS.*

THE danger attending the use of many drugs, even when taken in small doses, in cases of renal affections, has led DR. CHOPIN to investigate the conditions governing the elimination of salicylic acid by the kidneys, both in the healthy and diseased state (*Journal de Médecine et de Chirurgie Pratiques* for August, 1889). It would appear, from the author's results, that in all cases where there is a renal lesion the economy retains the medicine considerably longer than in the normal state, and it seems that salicylic acid, which, when the kidneys are normal, increases the quantity of urine, in acute nephritis, on the other hand, diminishes it. So, when moderate-sized doses are given in cases of kidney-affection, the well-known symptoms of intolerance of salicylic acid appear in the first or second day of its administration, for the reduction in the amount of urine retards elimination, and so leads to the accumulation of the drug.

These results have an especial importance in indicating the wisdom of prohibiting the use of salicylic acid as a preservative of foods, for even when given in the smallest amounts, when the kidneys are affected, toxic symptoms supervene. In France it is stated that more than one hundred thousand pounds of salicylic acid were used in 1880 for the preservation of foods, and the facts given above certainly justify the conclusion of the French Academy in prohibiting the use of this article for the purpose of preserving foods.

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### *SUBCUTANEOUS EMPLOYMENT OF ANTIPYRIN.*

DR. L. BACH has made two hundred and seven injections of antipyrin in one hundred different cases of various diseases, principally of a neuralgic character, calling for a remedy which would relieve pain, and has published his conclusions in his graduation thesis at the University of Würzburg, 1889.

Of these cases, there were cured twenty cases of muscular pain, nineteen cases of neuralgia, and eighteen cases of articular pain, making in all forty-seven. Fourteen cases of muscular pain, ten cases of neuralgia, and two cases of pain in the articulations, making in all twenty-six, are stated to have received temporary relief. No result whatever was noted in eleven cases of muscular pain, four of neuralgia, and one of articular pain. These cases may be again subdivided into the following groups: Nine cases of sciatica were cured, one case unaffected; five cases of lumbago were cured, one was uninfluenced; two cases of hemicrania were cured, three obtained temporary relief; three cases of trigeminal neuralgia were cured, three obtained temporary relief, and one was uninfluenced; seven cases of articular rheumatism were cured, two obtained temporary relief, and one was unaffected. The author further states that in twenty-six cases the patients complained that the injection was extremely painful, in thirty-two cases they stated that there was slight pain produced, and forty-two cases testified to entire freedom from pain. Finally, the author classifies his conclusions as follows:

1. Subcutaneous injections of antipyrin, as regards the production of local pain, is of the most varied action, the result evidently depending upon the individual disposition of the patient.

2. No difference between the first and subsequent injections can be made out.

3. Whenever possible, the injection should be made into the tissue of the muscles, since in this locality it is, at any rate, no more painful than in the subcutaneous tissue, and infiltration is avoided.

4. Previous injections of cocaine are to be recommended.

5. As recommended by Liebreich at the last Wiesbaden Congress, the injection should be made as near as possible to the seat of pain. An apparent exception to this rule is found in the fact that in hemicrania and orbital neuralgia relief will frequently follow with astonishing rapidity the use of injections into the deltoid muscle.

6. There is no probability of antipyrin ever being regarded as a substitute for morphine.

7. Injections of antipyrin arrest pain in hemicrania and in muscular pain, especially in lumbago and neuralgia of the sciatic and

trigeminal nerves. In most cases the relief is permanent; in others it lasts from six to eight hours.

8. In articular rheumatism it seems to be almost a specific, as, in the single case in which it failed to give relief, failure can be regarded as attributable to the complications existing in the case.

9. No difference is evident as regards its influence upon acute or chronic pain; it appears to act equally well in both cases.

10. The five cases in which chills, cold sweat, palpitation of the heart, and symptoms of syncope followed its use show that its employment should be carefully watched, although in no cases were the symptoms severe enough to cause any anxiety. Since in none of these cases was cocaine injected with the antipyrin, the results are attributable to the latter alone.

11. Only in the rarest instances will these injections fail to produce some improvement.

In most cases the author employed a solution of antipyrin made in boiling distilled water. In other cases he employed a solution consisting of one hundred and fifty grains each of antipyrin and water in which three grains of cocaine were dissolved, the latter solution being ordinarily less painful in its employment.

It is to be regretted that the author has not in any case given more accurate statements as to the dose which he employed, other than saying that he employed a syringeful of these solutions.

## Reports on Therapeutic Progress.

### *THE THERAPEUTIC VALUE OF OXYGEN INHALATION.*

At a recent meeting of the New York Academy of Medicine, Dr. W. Gilman Thompson read a paper on the therapeutic value of oxygen inhalation, with exhibition of animals under high pressure of oxygen (*Boston Medical and Surgical Journal*, July 25, 1889). He said that he had been impressed by the fact that while some observers claimed the most brilliant therapeutical results from the use of this agent, others held that it was of but little, if any, practical value, and still others used it in such a vague way that no reliance could be placed upon the results obtained. As was well known, the ordinary pressure of the atmosphere was fifteen pounds to the square inch: of this amount three pounds was exerted by the oxygen and twelve pounds by the nitrogen. The first question that arose was, Does an increased pressure really cause more oxygen to be absorbed? Under any circumstances the hæmoglobin of the blood could take up but two and a half per cent. more of oxygen, and it was also a fact that it could not enter the plasma to any extent.

In most of the older text-books it was stated that animals could not live in pure oxygen, the system being burned up, as it were, by the increased tissue-changes excited by it. This idea, however, was an entire mistake, as was conclusively demonstrated by Dr. Andrew H. Smith in the series of experiments made by him in 1869 and 1870. Having referred to some of the symptoms produced in the human subject by the inhalation of oxygen, he said that very little additional oxygen could be made to enter the system by any amount of pressure short of that which would result in injurious effects.

He then exhibited the apparatus which he had had constructed for the purpose of exposing animals to high pressures of oxygen. It consisted of a strong iron drum, or chamber, with glass-covered openings at each end, in which the animal to be experimented upon was to be placed; and to this oxygen was supplied at any degree of pressure desired, from a cylinder containing the gas at a pressure of two hundred and twenty-five pounds to the square inch. Two animals, a monkey and a pigeon, which had been subjected for one hour to a pressure of thirty pounds to the square inch, in oxygen, in addition to the ordinary pressure of the atmosphere, fifteen pounds, were taken from the chamber in an apparently perfectly normal condition.

Dr. Thompson next proceeded to make a detailed report of a number of experiments he had made upon animals which were in a normal condition at the time the experiments were commenced, the animals being dogs, cats, pigs, monkeys, guinea-pigs, pigeons, and alligators. It was found that all the animals could exist comfortably in the oxygen until a pressure exceeding three atmospheres was reached. The higher the order of the animal experimented upon the more quickly it became affected. As a rule, a decided fall of temperature, often amounting to from 4° to 6° F., was observed; and only in cold-blooded animals was there any rise of temperature. This marked decrease in temperature he did not believe was to be attributed at all to the

effects of the oxygen, but to the profound disturbances caused in the system by the high pressure employed. If, as was claimed by the older writers, a greatly increased tissue metamorphosis was caused by oxygen, this would unquestionably be accompanied by an increase, and not a diminution, of the body temperature. In a paper read before the Royal Academy of Madrid, Valenzuela reported similar results. In animals subjected to oxygen in a pneumatic chamber under increased pressure he found that the temperature was reduced several degrees, and rabbits in which septicæmia had been artificially produced had the temperature reduced to normal.

In such of the animals as died as a result of subjection to high pressure of oxygen, or were killed after removal from such exposure to high pressure, Dr. Thompson found pulmonary engorgement and dilatation of the right heart. The convulsions which usually resulted when the pressure was carried to a high point were, as a rule, quickly controlled by blowing off five pounds of pressure. He also tried the experiment of subjecting animals on alternate days to high pressure of oxygen and to compressed air, the series of observations being maintained for a considerable period. The cause of the convulsions produced by exposure to high pressure of oxygen, he said, was as yet undecided, but he was inclined to attribute it to the difference in the diffusion of oxygen and carbon dioxide under different degrees of pressure.

A second series of experiments was performed upon animals in which abnormal respiration had been induced. Dyspnœa might be classified as being due—

1. To abnormal conditions of the air.
2. To abnormal conditions of the blood.
3. To obstructed circulation.
4. To diminished surface for aëration.
5. To neurotic influences.

In a cat in which dyspnœa was produced by cutting both vagi instant relief was afforded by exposing the animal to oxygen; while, on the other hand, the dyspnœa was increased by compressed air.

In the second experiment a canula was introduced into the pleura of a dog. In the third, pulmonary congestion was caused in a cat by injecting a solution of nitrate of silver into the lung-tissue, and the dyspnœa resulting therefrom was greatly relieved by oxygen. In other experiments the lung was compressed by injecting considerable quantities of water into the pleura, and in still others the animals were bled to the extent of many ounces. The results of these experiments, he said, went to show that oxygen does aid in a moderate degree certain types of dyspnœa.

In considering the therapeutic value of oxygen it was to be borne in mind that it was a physical impossibility to take oxygen into the blood. This agent had been employed, first, as a curative in certain general diseases, more particularly of the blood and circulation; and, second, as a palliative in dyspnœa due to various conditions. Of late its use had increased to such an extent that two or three hundred thousand gallons of it were now consumed annually in New York City alone. Among the affections, besides dyspnœa, in which it was claimed that it had proved of benefit, were anæmia, chlorosis, croup, chronic gastric catarrh, migraine, cholera, and opium narcosis. It was used more generally in this country and on the continent of Europe than in England, and in Paris a supply was kept on hand at the stations along the Seine for use in resuscitating persons rescued from the river, and also at some of the police and fire stations.

In anæmic, chlorosis, etc., Dr. Thompson said he could see but little advantage over good fresh air in giving diluted inhalations of oxygen two or three times a day, as was the usual practice in such affections. It did not seem rational to him to expect that sufficient oxygen could enter the system under these circumstances to produce anything but a temporary effect at the best. In cases of blood-poisoning, again, he had failed to see any benefit derived from oxygen. In certain subjective cases of dyspnœa it no doubt gave relief, but in a case of poisoning by illuminating gas, which he had seen at the Presbyterian Hospital, it was kept up for nearly three days without producing any effect either on the rate of breathing or on the cyanosis present. In cardiac diseases his experience with oxygen had not been encouraging, and he referred particularly to a case of malignant endocarditis in which it proved of no avail in relieving the dyspnœa. In certain cases of asthma and of anæmic dyspnœa, however, it gave decided relief, and in such he believed it was an invaluable therapeutic agent, though not, of course, curative.

In the discussion which followed, Dr. J. West Roosevelt spoke of the relation of the amount of oxygen inhaled to that absorbed, and said that, while the amount which entered the plasma or the hæmoglobin of the blood was comparatively small, he believed it

was sufficient to cause appreciable results in many instances. As to the therapeutic value of oxygen, in the neurotic form of dyspnœa we had a condition in which the mere act of inhalation and the engaging of the attention of the patient would often have a beneficial effect. In anæmia he had met with fairly good results with oxygen, though the patients improved less rapidly than under the use of iron. If in any case the hæmoglobin was not saturated, an improvement showed that more oxygen was carried than under ordinary circumstances. On the whole, oxygen had proved of considerable value in his experience, and in cases of diminished surface for aëration he had seen cyanosis decidedly improved under its use.

Dr. George L. Peabody said that so many circumstances were involved in estimating the value of an agent like oxygen that it was difficult to arrive at positive conclusions respecting it. Thus, when it was not the only therapeutic agent employed, it was impossible to say just how much benefit was derived from it; and this difficulty was further increased in diseases which naturally tend to recovery. The question of the utility of oxygen he believed was still undecided. When the idea of its administration first occupied the profession it was the practice to give internally chemical substances, like chlorate of potassium, for instance, which were known to be rich in oxygen. It was far from certain, however, whether they yielded up their oxygen on entering the body; and even if this were so, it seemed probable that the resulting compounds might have a more or less caustic effect upon the tissues. This was apparently the case with osmic acid.

Later it had become the practice to give oxygen by inhalation. Under such circumstances its absorption depended probably on the amount of hæmoglobin in the blood at the time the oxygen was administered; but in any event the amount absorbed was unquestionably small. There was good reason to doubt the alleged efficiency of this agent, and personally he believed that, as a rule, quite as much relief could be obtained from ordinary fresh air. It might be tried, however, in maladies attended with dyspnœa, in which the blood is unchanged, such as pneumonia, emphysema, croup, and asphyxia from toxic gases; although, as Dr. Thompson had correctly stated, in poisoning from illuminating gas it had failed to give relief. There was no justification, he thought, for the extensive use of oxygen in general diseases, such as anæmia, chlorosis, lithæmia, etc. Although the pulmonary gymnastics of the inhalations might have a beneficial effect in certain instances, there were other remedies which could be employed with much greater advantage. That the use of oxygen hastened recovery in such cases he did not believe, and the recognized facts of physiology were certainly at variance with any such conclusion.

Dr. Beverly Robinson said that he differed entirely from Dr. Peabody, and that his clinical experience afforded the most conclusive proof of the immediate and marked relief resulting in many conditions from the use of pure oxygen. In anæmia he had found that those cases were most improved in which oxygen was used in connection with iron. The purity of the gas was a point of the utmost importance, and he said that one make of gas which he had formerly employed gave such poor results that he ceased to use it. There was a gas now manufactured in New York which was said to contain a certain proportion of nitrogen monoxide, from which he had obtained very satisfactory results; and it was worthy of note that Brown-Séquard had expressed the opinion that nitrogen was of great service in preventing the irritating and intensely exciting effects of oxygen alone.

In albuminuria connected with atrophic nephritis he had found the general nutrition of the patient notably improved under the use of oxygen; the digestive and assimilative powers being greatly assisted by it. Even in phthisis, while it did not have a curative effect, it might prove beneficial. In the first place, the inhalations caused the patient to thoroughly expand his lungs; secondly, oxygen was itself an antiseptic, and therefore indicated; and, thirdly, it had the effect of improving the general nutrition. As had been well said, oxygen was really prescribed every time that a patient was sent to the mountains, to Southern California, to the plains, or on a sea-voyage. But there were many cases in which it was impossible to send patients away, and he believed it was possible to stimulate the hæmoglobin in the blood, and thus to enable the patient who remained at home to carry more oxygen. In the use of oxygen he did not think we should be guided so much by experimental researches as by practical clinical experience. Without considering the curative effects of the remedy, there were certainly many cases where the

last hours of patients could be rendered much more comfortable by resorting to its use.

Dr. Walter Mendelson said that he felt compelled to agree with Dr. Peabody from what he had observed of the effects of oxygen. In anæmia it was true that he had seen some quite marked results under its use; but he did not believe that the benefit was in reality due to this agent. He cited the case of an old man who inhaled ten gallons of oxygen a day, and became greatly improved. This improvement, however, he was convinced was due to the systematic expansion of the lungs and to the moral effect of the knowledge that something out of the common was being done for him. In cases of dyspnœa from various causes he had seen more or less relief afforded by oxygen; yet all the patients died. Still, as Dr. Robinson had said, it was possible that their last moments were rendered more comfortable by the inhalations.

Dr. Mary Putnam Jacobi said that the amount of oxygen which the hæmoglobin carries varied under different circumstances. In asphyxia of various kinds the physiological capacity of the blood remained the same, and therefore the indication was to administer oxygen. The correctness of this had also been shown by clinical experience. In anæmia, and especially chloro-anæmia, on the other hand, the hæmoglobin was diminished. The condition was precisely the reverse from that met with in asphyxia, and we could not cause a much greater amount of oxygen to be absorbed.

Dr. Andrew H. Smith said he was gratified to find that the work which he did twenty years ago for the most part still remained good. At that time he had demonstrated that animals could live perfectly well for four days in pure oxygen, care being taken to remove the effete products of respiration. It was his opinion that under ordinary conditions the blood is not fully saturated with oxygen, and that the point of saturation corresponds with the physical demand. This allowed a pretty wide margin, and it was, perhaps, within this margin that a considerable amount of oxygen could be absorbed by the blood. Thus, the demand for oxygen was much greater in athletes engaged in violent exercise than in individuals making but little physical exertion. Therapeutically, he had seen the greatest benefit derived from oxygen in catarrhal conditions of the air-passages, such as was met with in suffocative bronchitis. In such cases he was at a loss how to explain the relief afforded by the oxygen, unless it was a fact that under these conditions the blood did not take up as much oxygen as the system required. When pneumonia was present so many conditions were brought into play that the matter was much more complex and the relief afforded by oxygen very uncertain. Dr. Smith also said he had used oxygen with satisfactory results in opium-poisoning.

Dr. Thompson, in closing the discussion, said that convulsions were produced in the animals experimented upon by the rapid increase of the pressure, and that such convulsions were quickly relieved by the rapid withdrawal of a portion of the pressure. He could not agree with Dr. Smith in his opinion regarding the saturation of the blood with oxygen, since he thought there could be no question that even under ordinary conditions the hæmoglobin was practically saturated with oxygen. In reply to Dr. Roosevelt, he said that many individuals suffered from dyspnœa whose blood contained more oxygen than that of those with anæmia or suffering from hemorrhages. Dr. Robinson was certainly mistaken in attributing any irritating effects to oxygen. Pure oxygen had no irritating effects whatever, as had been repeatedly demonstrated. It produced no burning up of the tissues, as had been formerly supposed, and he could see no advantage over ordinary air in the nitrogen monoxide referred to.

During the evening a cat and a dog were successively subjected to progressively increasing pressures of oxygen in the pneumatic chamber. When the pressure reached eighty pounds to the square inch the cat was seized with a convulsion, and the dog had a convulsion when the pressure reached a little above forty-five pounds. That this effect was not due to carbon dioxide was shown by the lime-water test. Both animals recovered after they were restored to the air.

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### *A NEW METHOD OF DETERMINING WHETHER A CHILD IS STILL-BORN OR NOT.*

The hydrostatic lung test for determining whether a child was still-born, or died after birth, is generally admitted to be unreliable. In fact, no one single test exists which can positively establish or deny as to whether a child was born dead or living.

In the *Archiv für Kinderheilkunde*, Band xi., Heft 1., Dr. S. S. Zaleski suggests a test which

depends upon the following facts. In the first place, the fœtal lungs only contain as much blood as is necessary for the nutrition of the pulmonary tissue, while the lesser circulation is only inaugurated after birth, and, as a consequence of this, the circulation in the lungs is in an instant many times increased. In the second place, the blood contains a constituent whose percentage is almost unalterable, and which is readily quantitively estimated,—namely, iron.

Therefore a lung in which the act of respiration has taken place will contain considerably more iron than one which has not respired. Dr. Zaleski, therefore, believes that from the amount of iron found in the lungs, it may be determined whether the child was born alive or dead.

Dr. Zaleski has estimated the amount of iron in seven cases. Four were cases of unmistakable dead birth; three, cases of infants born alive. In the former cases the average total amount of solids was 13.22 per cent., and of these, in the fresh state iron was represented by .0110; in the dry state, .0828. Of the three cases born alive, the average solids were represented by 15.87, representing in the fresh state .0188, and in the dry state .1182 per cent. of iron. In these cases the application of the hydrostatic lung test was very contradictory; one case, which was unmistakably still-born, giving a positive answer, another, which was unmistakably born alive, giving a negative answer.

From his studies Dr. Zaleski believes that he is warranted in drawing the following conclusions:

*First.*—The per cent. of solids, as well as the per cent. of iron, is considerably less in the lungs of children which have not breathed than in the lungs of children born alive.

*Second.*—The difference is especially evident in comparing in each individual case the amount of iron with the amount of solids.

*Third.*—Even in the comparison of the averages the difference is very perceptible.

*Fourth.*—The amount of iron in the lung-tissue increases with the age of the fœtus or the child.

*Fifth.*—Diseased conditions of the lungs have no marked influence on the amount of iron.

*Sixth.*—The imbibition of the pulmonary tissues with blood appears to be without influence of this test.

*Seventh.*—This test has never been found to be contradictory to other tests or to known facts.

*Eighth.*—The amount of iron in the lungs is invariably dependent upon respiration, and increases in direct proportion to the activity of the functions of the lungs.

From a theoretical point of view, the following objections may be made to this method:

*First.*—The process requires a special education, and the facility for making a chemical analysis. This objection may be met, however, by the fact that all the physician requires to do is to ligate the roots of the lungs when they may be subjected to the hydrostatic test, and then submit them to the chemist for analysis.

*Second.*—The difference in the amounts of iron is so small that an error may be readily introduced; in this connection, however, it is only necessary to remember that the analysis must be made by a practised chemist, and that the differences are too great to fall within the probable error.

*Third.*—The amount of iron may vary in different individuals, since the amount of iron in the liver and spleen are subject to sudden variations. This objection may be met by the fact that the liver and spleen are blood-making organs, and therefore the percentage of iron in them must be subjected to variation. This is not, however, the case with the lungs.

Finally, it must be admitted that further investigations are required before it can be positively stated that various pathological conditions, either of the mother and fœtus or the child, will have an influence on the amount of iron in the lungs, such as anæmia, leucocythæmia, or morbus Werlhofii, where the iron is diminished, or diabetes, where it is increased; while it must not be overlooked that, through neglect in ligating the umbilical cord, there may be serious bleeding, which will diminish the amount of blood, and, as a consequence, the amount of iron found in the lungs.

The author finally claims that this method is applicable to the examination of lungs which are already in a state of putrefaction, where, of course, other tests cannot be applied, and where artificial respiration has been employed. In the latter case, however, it must be determined whether artificial respiration has only led to the introduction of air into the alveoli, and not to the introduction of blood into the pulmonary capillaries. In addition, we may mention that Dr. Nikitin claims that if the stomach and intestine of the new-born child contained sufficient air to cause them to float on water, and if the artificial injection of air can be excluded, there is strong probability that the child was born living.

### *THE TREATMENT OF CHOLERA BY SUBCUTANEOUS INJECTIONS OF PERCHLORIDE OF MERCURY.*

In the *Indian Medical Gazette* for July, 1889, SURGEON MAJOR OSWALD BAKER reports a case of a seaman, aged 22, who was admitted to the Moulmoin General Hospital with well-developed symptoms of cholera. The history of his attack was briefly as follows:

He was apparently well when he turned in on the preceding night, but in the early morning—2 or 3 A.M.—he was taken with profuse purging and copious vomiting, and by the time daylight broke, he was very ill, and barely able to stand.

He was carried from the gharry, and at once put to bed. A draught containing one drachm of liquor hydrargyri perchloride and ten minims of tincture cannabis indica was immediately given; hot-water bottles were brought for his extremities, and he was allowed ice to suck.

The draught was repeated at 2 P.M., but it was not probable it would be kept, for vomiting was constantly occurring, and, in fact, the medicine was forthwith rejected.

Mustard plasters were prescribed for the præcordia and the epigastrium.

By 8 P.M. his condition was most unpromising; his pulse was rapid, feeble, and irregular in force; his voice, weak and hoarse from the first, was reduced to a whisper; although there had been no discharge from the bowels since 3 P.M., the vomiting did not abate, and his condition of collapse was becoming extreme.

It was at this stage that ⅓ of a grain of perchloride of mercury was injected deeply into the gluteal region. Two hours later there was a decided improvement in his pulse, and the state of general collapse was less pronounced. On the following morning it was evident that a reaction had taken place. His vomit, instead of being colorless, was stained with bile, his pulse was stronger, the voice fuller, and the body warmer. The repeated vomiting of clear bile-stained fluid continued throughout that and the following day, although the nourishment given was generally retained. He voided urine for the first time forty-three hours after the injection was given, the suppression having lasted in all for sixty hours, and from this time forth his restoration to health was sure and steady. Ten days later he had regained much of his strength, and was discharged from the hospital.

Mr. Baker states that he was led to employ an injection of the perchloride of mercury deeply into the muscular structure from the fact that its administration in the usual way was frustrated by vomiting, and from the fact that its therapeutic action was, in the presence of collapse, more likely to be exercised in the way it was administered than in the usual way of taking it into the stomach. The solution which Mr. Baker employed was prepared after Mr. Bloxam's formula, which is, chloride of ammonium, 16 grains; perchloride of mercury, 32 grains; dissolved in 2 ounces of distilled water. This solution is said to be permanent, and ten minims contain a third of a grain of the perchloride. Mr. Baker further adds that he has injected ten minims of this solution into the gluteal region of two hundred and twenty persons (not suffering from cholera). In these cases the injection was always followed by some swelling, which, in the majority of cases, took more than a week to disappear. Slight pain was produced by the injection, but, on the whole, the local inconvenience following the operation was insignificant; neither ulceration, suppuration, nor any obvious constitutional derangement was roused. The best site for the introduction of the needle appears to be on a line with the great trochanters, and some two inches internal to them, but absolute precision is not necessary.

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### *THE THERAPEUTIC VALUE OF LIPANIN.*

HAUSER reports the experience which he has had with lipanin in dispensary practice. It was given in small doses after meals, the dose ranging from 1 to 3 teaspoonfuls three or four times daily. It was used with thirty-eight children, ranging in age from 15 months to 13¾ years, for anæmia, chorea, rachitis, chronic tuberculosis, and scrofula, or during convalescence after acute febrile diseases, typhoid fever, and diseases of the digestive organs. The observations and experiments showed that it was usually taken with less repugnance than cod-liver oil, many children taking it without objection, especially if something be given to remove its taste. A peppermint lozenge or a piece of dry bread may be given for that purpose, and menthol may be used in cases of tuberculosis in the proportion of 5 grammes to 150 of lipanin. All patients increase in weight under its use except those who have hectic. The lipanin may be combined with different medicaments, or

with olive oil, mayonnaise, sauces, and salads. In the author's experiments it was well tolerated by patients who could not bear cod-liver oil even in small doses, and by those whose digestive organs were weakened. Patients with anæmia, chorea, and rachitis rapidly increased in weight under its use. In the chronic wasting diseases, especially in phthisis pulmonum, it was remarkable to see the favorable influence which was produced in the majority of cases upon the nutrition and upon the general condition. In those who had already become convalescent there was great increase in weight, while healthy children were not perceptibly influenced by its use. Lipanin was absorbed in these investigations to an extraordinary degree. The volume of fats and fatty acids recovered with the stools during its use varied within very narrow limits. The maximum of fats was .736 per cent., and of fatty acids .814 per cent. In children under 6 years of age the quantity given was ½ teaspoonful to a teaspoonful three times daily. One should begin with small doses, and gradually increase them, first giving them after meals, and finally before meals. Lipanin may also be given in hot weather without difficulty and with good results. The preparation of lipanin malt extract, consisting of 1 part lipanin to 2 of malt extract, is a very useful one, and is readily taken by children.—*Archives of Pediatrics*, July, 1889.

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### *GLANDULAR FEVER.*

Under this name, E. Pfeiffer recently described, at the Congress of German Naturalists at Cologne, a condition which is of frequent occurrence, and yet is not mentioned in text-books (*Wiener Medizinische Blätter*, No. 30, 1889). The affection is inaugurated with a chill, followed by fever, pain in all the joints, great restlessness, loss of appetite, and vomiting; its cause is unknown. The temperature will be found to be from 102.5° to 104° F.; the tongue slightly coated; the fauces slightly reddened, but without any deposit. In other respects all the organs are normal, with the exception that all the lymphatic glands of the neck, especially those at the posterior border of the sterno-cleido-mastoid muscle, will be found to be swollen and painful on pressure and on motion. In light cases the fever disappears on the second day, and the swelling disappears in a few days; in other cases, the disease, which at first was confined to one side of the neck, will extend to the other. The pharynx will be found to be inflamed, and there may be some coryza and cough. In such cases the fever will persist for several days; on the third or fourth day the liver and spleen may be found by palpation to be increased in size, and pain in the median line of the abdomen will be complained of. If the invariably favorable course of this disease was not recognized, serious alarm might be caused by the symptoms of this affection. The characteristic feature is the swelling behind the mastoid muscle. The affection appears to be of an infectious nature from the fact that it is apt to occur in epidemics which will affect entire families. Pfeiffer reports an instance where four children were similarly affected within two weeks; in all the glands of the neck were swollen and painful. It is, however, uncertain as to whether this affection is a special disease, or whether the glandular fever only represents an abortive state of some other affection, such as typhoid, measles, scarlet fever, or varicella. The treatment of this affection need only be confined to inunction with oil on the neck, covering the neck with cotton, and in severe cases confining the patients to bed.

At the same meeting Dr. Heubner stated that he had seen similar cases in which no definite origin for these symptoms could be detected other than that they constituted a special disease.

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### *SOME POINTS IN THE TREATMENT OF INTESTINAL OBSTRUCTION.*

At the meeting of the Royal Academy of Medicine in Ireland, held June 7, 1889, Mr. Thornley Stoker read a paper with the above title (*Medical Press and Circular*, August 14, 1889). He dealt chiefly with the treatment of those cases where the obstruction was, owing to the paralyzed condition of the bowel, due to the accumulation of fæces or flatus. In this class of cases a lumbar operation is rarely indicated, and, owing to the extreme meteorism, laparotomy is usually a very fatal proceeding. He urged the adoption of other measures previous to any precipitate opening of the abdomen, advocating the employment of pressure and massage, and the judicious use of purgatives. Of these latter remedies he considered undue fear existed. Of belladonna, when pressed to its full effect, he spoke highly, and quoted cases in evidence. Local treatment by rubefacients he stated his disapproval of, as he did also of opium, which he regarded as mask-

ing symptoms, and doing little or no good. Tapping the bowel with an aspirator-needle or fine trochar he had found of great use where much tympanitis existed. A large part of the paper was devoted to an attack on the "long tube," which he considers a dangerous and useless engine, productive of no effects which cannot be gained by the use of a shorter and safer instrument.

The PRESIDENT was of opinion, notwithstanding the strong outcry against opium, that that drug, if of use in any case of abdominal surgery, gave relief in intestinal obstruction. In his own practice he invariably used it subcutaneously. Inversion he had seen practised, but never with good results. The enema was of great use, not by O'Beirne's tube, but by the ordinary one. Puncture of the intestine also gave relief, but instead of the aspirator he preferred using a trocar (one-tenth of an inch in diameter) and canula.

DR. MYLES, observing that Mr. Stoker mentioned a case as presenting symptoms of paralytic obstruction, a difficult question in the examination papers—"Enumerate the different varieties of intestinal obstruction and give the diagnosis"—at once arose to his mind, and he said to himself, "Here at last the difficulty is solved." But it seemed that Mr. Stoker was carried away by his noble rage against O'Beirne, and forgot to give the information which he so anxiously anticipated. There were, however, some points extremely interesting raised. Mr. Stoker had stated that by cautious injection any fluid could be propelled to any distance along the colon. When he was house surgeon at Steeven's Hospital, in a case of constipation, he directed an injection to be given slowly till the man could hold no more, as he regarded the measure of the purgative to be the amount the man could hold. The operator proceeded leisurely and quietly with his task, and in twenty-five minutes the message was brought that he was still pumping. And what was the fact? With each stroke of the pump the fluid that was being injected came out of the man's mouth. In reference to the belladonna treatment, he had again and again seen it used in $\frac{1}{6}$-gr. doses, but generally combined with opium. Although the theory was that opium was opposed to belladonna, Brunton showed that it acted in conjunction with belladonna, and, instead of producing paralysis, it converted the normal into a tetanic spasm, which was as near being tetanus as the muscle could go.

MR. CORLEY feared that Mr. Stoker's observations on the *furor operandi* might, as coming from a surgeon of his experience, have a more serious result than he anticipated; for the present tendency was to try a great many remedies before thinking of operative procedure. As regards puncture, he recalled a case in which he was called on to operate. The surgeons were in favor of laparotomy; the physicians, of colotomy. Lumbar colotomy was performed with success; but the patient died three days afterwards. Before the operation the patient had been punctured nearly a dozen times in various parts of the abdomen, a quantity of air escaping. Dr. Reuben Harvey made a post-mortem examination, but was unable to find the site of a single puncture. As regards opium, he coincided with Mr. Stoker, and he was sorry to hear the President giving the weight of his authority to the use of opium. He had found that it was a dangerous agent, masking the symptoms, while he doubted if it assisted the action of the bowels. Opium lulled the pain and the acute symptoms, but it landed the patient and the doctor in a fool's paradise. In his experience he did not remember a case in which he saw any advantage from it, while he recalled two or three in which the drug accelerated fatal termination by postponing the operation beyond the time at which it was likely to be efficacious. He did not think that most surgeons were likely to operate too soon, and that, notwithstanding the modern views of peritoneal surgery, they would be disposed to open the abdomen rashly for intestinal obstruction, remembering that every variety of intestinal obstruction had been known to yield to the influence of medicine.

MR. KENDAL FRANKS endorsed Mr. Corley's observations as to the likelihood of the opening passages in Mr. Stoker's paper being fraught with danger. He had himself never seen the abdomen opened too early, but he had seen it opened many times too late, and the tendency among young surgeons was not to open it in a hurry.

MR. WILLIAM STOKER said the choice of treatment, whether palliative or operative, depended on the diagnosis as to whether the obstruction was due to deficient force or to increased resistance. No doubt, the two conditions were interwoven; but once the surgeon made up his mind that the obstruction was due to increased resistance, he need not dread to interfere. He had himself tapped the distended bowel, and he never dreaded doing so, remembering that the three layers—namely, the muscular and elastic—between the serous and mucous, which were non-distensible.

would not continue opposite each other unless the distention remained constant, but would slip and leave a valvular opening. As regards medical remedies and the requisite doses, the extract of belladonna was a drug of varying potency.

DR. DOYLE considered it the duty of the medical man to administer the enema himself.

MR. W. THORNLEY STOKER, in reply, said he had at the outset disclaimed any intention of arguing against operation, and early operation, too, as he was not himself either afraid to use the knife or likely to avoid a sufficiently early operation. He had also particularized and dealt only with the class of cases in which operation was rarely, if ever, admissible,—namely, those in which the intestinal obstruction was due to fæces or flatus producing the paralysis of overdistention, and it was in reference to these in which he spoke of the remedies. He agreed with Mr. Corley's observations about opium. As regards tapping the bowel, he used an aspirating-needle the size of a French No. 5 catheter, with a stilette to clear it when it became impacted, but did not use the aspirator as a means of suction.

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### *THE THERAPEUTIC ACTION OF BOLDO.*

The value of the use of boldo in cases of hypertrophy and congestion of the liver is pretty well admitted. In the *Revue Medico-Pharmaceutique* for July 31, 1889, DR. CAMPENON writes that he has recently had under his care two cases of cirrhosis of the liver, characterized by increase in the volume of that organ, dilatation of the subcutaneous veins, and slight ascites, in which he attributes cure to the use of boldo. Dr. Campenon states that he has obtained the best results from the use of alcoholic preparations of boldo, especially in cases where there is at the same time dilatation of the organ and a burning sensation in the stomach.

Dr. Campenon prescribes boldo as follows: For the first day, 5 drops of the tincture of boldo, given in a little water a few minutes after eating; 6 drops are given the second day, and the dose is increased each day until 15 or 20 drops are given at a dose.

When this maximum is reached, the dose is then diminished little by little until it reaches 5 drops, and then again, for the second time, increased. To produce relief, the treatment must be of long duration, and attention must be given to regulating the patient's diet.

### *THE TREATMENT OF CERTAIN ACUTE COMPLICATIONS OF GONORRHŒA.*

Gonorrhœa in the male is frequently the cause of two disorders, which always distress the patient and often annoy the surgeon by their intractability to treatment. A man who has had two or three attacks of gonorrhœa is but little troubled by a recurrence of it, but if it once be complicated with cystitis or epididymitis, he will thenceforth regard a clap with undisguised dismay; and if his medical adviser is accustomed to rely upon the commonly employed treatment of these complications, he, too, will not view the situation with equanimity, for, judging from common experience, few diseases of the male occasion more temporary dissatisfaction with treatment than these of the bladder and testicle secondary to gonorrhœa.

For these reasons the following methods of treatment proposed by DR. C. H. H. HALL, United States Navy, seem worthy of notice (*Sei-I-Kwai Medical Journal*, July, 1889). Immediately upon taking charge of a case of gonorrhœal epididymitis, Dr. Hall orders the application of a solution of 4 parts of nitrate of silver in 30 parts of sweet spirits of nitre, applied to the testicle with a soft brush.

Dr. Hall recommends sweet spirits of nitre as an application, because it dissolves the oil of the natural secretions, and therefore wets the part more effectually than water. After applying this solution once a day for two successive days, a piece of lint moistened with 30 parts of laudanum and 30 parts of solution of subacetate of lead to 440 parts of water, is laid upon the testicle and kept wet with this solution. The solution of silver nitrate so applied will result in the removal of a considerable part of the epidermis, but Dr. Hall writes that he has never observed any toxic effects from absorption of the opium or the lead. Combined with the use of the suspensory bandage, it is claimed that the effect of this treatment is prompt and complete relief, and a steadily progressive reduction of the inflammation, and return to the normal state within two weeks.

It often happens that about the time a patient is congratulating himself upon recovery from gonorrhœa, he begins to have frequent calls to pass the urine, is disturbed at night, has discomfort in the suprapubic region, and feels ill at ease after he has apparently emptied the bladder.

Ordinarily these symptoms will increase in severity until there is constant desire to pass

the water, vesical tenesmus, and acute aching pain in the suprapubic region, all symptoms of more or less acute cystitis. In September, 1887, a patient in the United States Hospital, Yokohama, with an aggravated condition of this sort, had been treated in the regular service of the ward for two months with everything that promised relief, including washing out of the bladder with hot solution of boric acid; but, although the symptoms had abated, there was still suprapubic pain, vesical tenesmus, and frequent micturition four times each night and each hour or two during the day. The well-known influence of vaginal injections of hot water upon pelvic inflammation suggested the use of rectal enemata in this case. Large enemata, from one and a half to three pints, were used each four hours. Relief was felt at once, and improvement manifest on the following day. At the end of a week all discomfort had disappeared, and the urine was passed but twice at night. At the expiration of the second week, patient was disturbed but once at night and was otherwise well.

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*DITHIOSALICYLATE OF SODIUM.*

Dithiosalicylate is recommended by DR. H. LINDERBORN as a substitute for the salicylate of sodium (*Revue Générale de Clinique et de Thérapeutique*, August 8, 1889). This body is formed by the combination of 2 atoms of sulphur and 2 molecules of the salicylate of sodium. It is a grayish-white powder, very hygroscopic, and very soluble in water. In the urine it does not form the violet reaction with perchloride of iron. In twenty per cent. solution it destroys various bacilli and microbes in forty-five minutes; in doses of 3 grains, repeated twice in twenty-four hours, it has succeeded in arresting articular rheumatism, even where salicylate of sodium had failed, and has been used by the writer with success in gonorrhœal arthritis without producing gastric trouble, ringing in the ears, or any tendency to collapse.

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*RUPTURE OF THE CORNEA TREATED BY EVISCERATION OF THE EYEBALL, AND THE INTRODUCTION OF A GLASS GLOBE INTO THE SCLEROTIC.*

At a recent meeting of the Medico-Chirurgical Society of Montreal, DR. BULLER introduced to the Society a boy, 8 years old, who had received an injury to his right eye from a stick thrown at him by a playmate (*Montreal Medical Journal*, August, 1889). Dr. Buller first saw the patient eight days after the injury had been inflicted, when he found the eye shrunken and commencing to present characteristic appearances of traumatic cyclitis. There were two fresh scars from recent wounds in both upper and lower lids. The wound of the eyeball extended vertically through the entire cornea and for a short distance into the sclerotic, both above and below. The cornea presented the appearance of two small turbid cornea separated by a shallow groove. Perception of light was lost, there was no conjunctivitis, and the deeper structures had evidently not undergone any active inflammatory changes. The shrunken eyeball was quite soft and slightly tender to the touch. The condition was such as would evidently involve considerable risk to the other eye from sympathetic ophthalmia. The case was one which demanded some mode of treatment calculated to obviate this danger. Dr. Buller does not approve of removing the eyeball in children on account of the faulty development of orbit and conjunctiva, which this operation involves in young people, and the operation of optico-ciliary neurectomy would have, at best, left a very small and imperfect eyeball. The child being perfectly healthy, with no tendency to suppurative inflammation, Dr. Buller determined to try the operation recently devised by Dr. Mules, of Manchester,—that is, the insertion of a globe into the cavity of the sclerotic. The operation was done under rigid antiseptic precautions. The cornea was removed entirely, with so much of the sclerotic above and below, as to give the opening the shape and direction of a vertical ellipse. All the contents of the globe were carefully scraped out with a sharp scoop, and the bleeding from the inner scleral surface arrested by packing with aseptic sponges. All bleeding had ceased in about fifteen minutes, and the smallest-sized glass globe was inserted. This globe was perfectly smooth, and rather more than half an inch in diameter. The smaller size was selected in order to avoid all danger of undue tension when the lips of the scleral wound were united in a vertical direction by three silk sutures. The conjunctival aperture was then united horizontally also by three silk sutures. The eye was cleansed with a solution of corrosive sublimate (1 to 5000), and fine iodoform powder dusted in the conjunctival sac, and the lids were covered with absorbent cotton, likewise dusted with iodoform

powder, this being kept in place by a tolerbly firm bandage over both eyes. This dressing was allowed to remain undisturbed for forty-eight hours. When removed, the eyelids and orbital tissues were considerably swollen and tender, but both swelling and tenderness subsided in a few days under the application of cold aseptic compresses, and the case did remarkably well. An artificial eye was then inserted with very satisfactory results, as far as appearances were concerned.

There was no sinking of the upper lid, and the movements of the eye were apparently normal. The sutures in the sclerotic were hidden from view and created no irritation. Dr. Buller believes that the result is far more satisfactory than could have been obtained by enucleation or by optico-ciliary neurectomy.

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### *ANTIFEBRIN IN QUINSY.*

In the *Wiener Medizinische Blätter* for August 8, 1889, Dr. W. Sahli writes that on the second day of a violent attack of quinsy he took 7 grains of antifebrin, and within a quarter of an hour all headache and pain on swallowing or in mastication had completely disappeared. On the next day there was a slight return of pain, which was again almost immediately subdued by the repetition of the dose of antifebrin, and this treatment was continued on each reappearance of pain with the same results, until the disease had run its course.

Dr. Sahli refers to twelve cases of quinsy in which 4 grains of antifebrin likewise produced satisfactory results. The same effect was also observed by the writer in the relief of pain in angina of an epidemic of scarlet fever and diphtheria. It relieves pain in all movements of the throat, and, by rendering the operation painless, is a great assistance to gargling the throat, especially in children, while, of course, it also assists in the administration of food.

Dr. Sahli does not, however, claim that antifebrin is a specific for angina or diphtheria, since the pathological processes are not influenced by its administration. He administers it shaken up in a little spirits and syrup.

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### *ERGOT IN CHILDBED.*

Dr. Pinzoni, of Bologna, has made some interesting clinical experiments in order to determine, with something like precision, the value of ergot in childbed. He administered ergot systematically to ninety-one lying-in patients, generally in the form of about 2 grammes of the powder daily. Seventy-nine similar cases were treated without ergot. After comparing the series, he came to the following conclusions: Ergot has little or no influence on the temperature, at the most a slight rise is occasionally observed. It hastens the pulse a little, yet has no marked influence on the physiological slackening of the pulse observed during the first days after delivery. The physiological increase in the secretion of urine during the first days is favored by ergot. The involution of the uterus, according to Dr. Pinzoni's researches, is either totally uninfluenced by ergot, or slightly retarded. The escape of the lochia remains normal when that drug is given; but clots, as universal experience has proved, are more readily expelled. The lochia seldom smell fetid when the ergot is taken. Ergot delays the after-pains in primiparæ, and lessens them when they have already commenced. The secretion of milk is retarded and lessened by ergot, and sometimes completely suppressed. Ergot seems, in the belief of Dr. Pinzoni, to be a prophylactic against puerperal fever, an indirect antiseptic agent. When infection has already taken place, ergot appears, on the other hand, to hasten the entrance of the virus into the circulation. Dr. Pinzoni's researches appeared in the *Bollettino delle Scienze Med. Bologna*, series vi. vol. xx.—*British Medical Journal*, August 10, 1889.

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### *THE USE OF IODIDE OF POTASSIUM IN LARGE DOSES.*

Two years ago Dr. Haslund recommended the treatment of psoriasis by the administration of excessive doses of iodide of potassium. His practice was to commence with 45 or 60 grains daily, and every two or three days to increase the dose by 20 or 30 grains, until three hundred to four hundred and fifty, or even seven hundred and fifty grains were given each day. After each dose a large glass of water was taken, so as to cause sufficient dilution of the drug in the stomach.

The duration of treatment, according to Haslund, was about five weeks. M. de Molenes likewise published two cases which were cured by this treatment, one of the cases taking four hundred and fifty grains daily, and the other six hundred grains each

day. But it is well known that certain patients are absolutely incapable of supporting even small doses of the iodides without producing serious effects, and all have failed to explain the intolerance of iodides in some cases, in small doses, while these immense quantities may be given in other cases without bad effect.

According to Aubert, the association of small doses of belladonna with the iodides will render the system less susceptible to the latter; while HUCHARD (*Revue Générale de Clinique et de Thérapeutique* for August 8, 1889) claims that the association of milk and other diuretics with the iodides will diminish the chances of intolerance by assisting the elimination of the drug through the kidney. Dr. Huchard also claims that the association of arsenic with the iodides will produce the same effect, giving one drop of Fowler's solution for every fifteen grains of the iodide, although more than twelve to fifteen drops of Fowler's solution should never be given in one day. A remarkable fact in this connection is that sometimes large doses of the iodide will be better supported than small doses. This, according to Huchard, is to be explained as attributable to the diuretic effects of large quantities of iodide of potassium. In all cases where the iodides are prescribed in large doses, lesions of the stomach, intestines, or kidneys should first be excluded.

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### *INTRAVENOUS INJECTION OF CARBONATE OF SODIUM IN POISONING.*

DR. SANQUIRICO, of Sienna, treats cases of poisoning by intravenous injection of large quantities of an eight per cent. solution of carbonate of sodium, and so producing a very active secretion of urine. He was able to give the animals he experimented on (rabbits and dogs) considerably larger doses of some poisons that are usually lethal without fatal results, if he at the same time injected his solution of sodium. When he used both the sodium carbonate injection and the usual antidotes, he was able to save his animals even after doses of poison that would have certainly proved fatal if only one of the two modes of treatment had been applied. The only poison which withstood this combined treatment was nicotine. He points out that the diuretic treatment can only be successful when the functional power of the heart and of the central nervous system have not been so seriously paralyzed as to prevent antidotes from exercising their influence, or so as to cause a diminution of the secretion of urine in consequence of the weakened action of the heart.—*Lancet*, August 24, 1889.

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### *SOME POINTS IN THE TREATMENT OF GONORRHŒA.*

We recently called attention to the method of treatment of gonorrhœa proposed by Dr. E. P. Rice, which consisted in introducing a soft rubber catheter into the urethra as far back as the prostatic portion, through which he injected two drachms of an emulsion consisting of three drachms of boric acid and one ounce of glycerin.

In the *Medical Record* for August 17, 1889, DR. BRANSFORD LEWIS takes exception to several points in this method of treatment. In the first place, he claims that to deposit two drachms of any fluid in the prostatic urethra would almost assuredly defeat the primal object of the operator,—that of spreading his application over the portion of the urethra that is inflamed; for the muscular structures surrounding the urethra are so arranged that, at the triangular ligament, they divide the canal into two parts,—the anterior and posterior urethra. That this division is real, physiological as well as anatomical, and not merely arbitrary, and for the sake of making finer but impractical distinctions, may be demonstrated in various ways, one being the very fact that, if we inject a quantity of water, say a quart, through a catheter whose eye is just distal to the triangular ligament, that same amount will return alongside the catheter and escape at the meatus; whereas, if we place the eye of the catheter just beyond (proximal to) this muscular ring, and then inject, the fluid will not reappear at the meatus, but will pass on into the bladder. Indeed, this is the mode of irrigating the posterior urethra originated and practised by the recently deceased Ultzmann in chronic posterior urethritis. So, therefore, the bulk of the two drachms (aside from what has remained within the catheter) used by Dr. Rice, probably exercises its effect on the mucous membranes of the posterior urethra and bladder, and all that reaches the inflamed area does so by following in the track of the catheter as it is being withdrawn.

It has been determined that the natural rate of progress of the gonococci, as they invade the tissues from the meatus backward, is notably a slow one; that, unless carried back by some accident or instrumentation, they do not

reach the bulbo-membranous neighborhood until about the third or fourth week of the disease; and, furthermore, that it is only a minority of the cases in which the posterior urethra is involved at all, being preserved from this by the musculo-membranous barrier before mentioned.

It will be readily conceded, of course, that to treat any portion not involved in the inflammation is nothing short of "meddlesome surgery," aside from the risks, to which it leads, of infecting innocent tissues. So that the corollary of the above premises would lead us:

1. To refrain from passing our instrument to even the deeper portion of the anterior urethra, in the early stages of the affection; and,

2. Never to pass it beyond the compressor urethræ muscle, unless the posterior urethra be affected, which is always shown by well-defined symptoms.

Another question comes up: Is glycerin the best vehicle we can use in making our antiseptic emulsion? From its hygroscopic nature and rubefacient effect, is it not likely to be irritating, rather than soothing, to the raw and tender membrane? And, again, in the presence of water, glycerin loses entirely its lubricant properties; with the first urination out it goes, and the medicament with it, so that, until the next treatment, the membrane is minus the beneficent influence of the antiseptic.

None of these objections applies to vaseline or lanolin. They are perfectly bland and unirritating, giving rise, because of their presence, to absolutely no pain or irritation; but, on the contrary, mollifying that which already exists, by keeping the inflamed surfaces from rubbing against one another, and also, by the coating which they form, preventing the scalding contact of the urine. Water has little or no effect on them, so that they are persistent and adhere to the canal-wall even after several urinations; this assures the continuous application of the remedy, as well as of the protecting vehicle, and obviates frequent repetition of the treatment.

Of the two, vaseline and lanolin, the latter, in Dr. Lewis's estimation, is preferable. It is a far more elegant preparation; is more readily absorbable, carrying with it into the subepithelial layers, the stronghold of the cocci, the germicide with which it is charged; and lanolin is antiseptic in itself.

As a means of introducing this preparation, Dr. Lewis has been using a hard-rubber rectal ointment-applicator, modified by having a catheter-end, four or five inches long, which may be inserted into the urethra to any depth desired; the screw-piston serving to express the ointment at the proper time.

Boric acid is, doubtless, an excellent remedy; it fulfils two essential requirements: it is antiseptic, and at the same time unirritating. Dr. Lewis has been in the habit of using resorcin, three or four per cent., to which, in the later and subacute stages, he adds some antiseptic astringent, such as the sulpho-carbolate of zinc.

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### *AMYLENEHYDRATE IN EPILEPSY.*

WILDERMUTH writes in the *Deutsche Medicinische Wochenschrift* for August 15, 1889, that he has in a number of cases obtained the best results in epilepsy from the use of amylenehydrate, and maintains that its employment is especially indicated when the epileptic attacks rapidly follow each other,—when there is marked bromism, so that a temporary use of some other remedy is necessary, and in nocturnal epilepsy, either alternately with bromides, or, in new cases, combined with atropine. The dose which he gives is from 30 to 60 grains in a ten per cent. watery solution. In some cases the amount given in a day may be increased up to two drachms without disadvantage. The taste may be disguised by dilute wine or syrup. If the patient has previously been under the influence of bromide preparations, the dose of the bromide may be rapidly diminished, and if the improvement continues, may be entirely suspended. Hypodermic injection of pure amylenehydrate may be given directly during the convulsion. Dr. Wildermuth adds that he has never seen any unfavorable after-effects follow the use of this remedy, with the exception that after a very prolonged use of very large doses there is considerable somnolence produced, and a certain amount of gastric disturbance. In many cases he writes that he has seen the convulsions entirely disappear after six or eight weeks' employment of this medication.

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### *ANTISEPTIC MIDWIFERY AND PLACENTA PRÆVIA.*

At the recent meeting of the British Medical Association (*Lancet*, August 17, 1889), DR. CULLINGWORTH opened this Section with some suggestions towards the further application of antiseptic principles to midwifery practice. He pointed out that the very fact of the use of

chemical disinfectants being an essential part of the antiseptic method carried with it the danger of regarding the part they play in the treatment too exclusively, and of neglecting other means of insuring antiseptic cleanliness, which, though perhaps subsidiary, are nevertheless of the greatest importance. Among these means he particularly mentioned the avoidance of frequent vaginal examinations, especially during the first stage of labor; the immediate removal from the uterus of matters retained either after labor or after an incomplete abortion; the desirability of allowing patients after a normal labor to sit up in bed occasionally on the second or third day, so as to carry out the great antiseptic principle of drainage; the immediate suture of the perineum wherever the tear is at all considerable; and the more general substitution of absorbent pads for the old-fashioned linen diaper. Our zeal for the safety and well-being of the recently-delivered mother ought not to make us wholly unmindful of the newly-born child. Could we usefully apply antiseptic principles to the management of the infant? The answer was, that we could in at least two ways,—viz., in the adoption of means to prevent ophthalmia, and in the mode of dressing the remains of the umbilical cord. In regard to the former, Dr. Cullingworth recommended, in addition to the wiping of the child's eyes with a clean, soft, dry cloth as soon as the head was born, and if possible before the eyes were opened, the application of a solution of corrosive sublimate (1 in 3000) by squeezing over each eye a saturated pledget of cotton wool immediately after the first washing. Credé's method of dropping in a two per cent. solution of silver nitrate need only be adopted in cases where the mother was known to have suffered from a purulent vaginal discharge. The report of a committee of the Ophthalmological Society showed that from thirty to forty per cent. of the inmates of blind institutions in Great Britain and Ireland owed their blindness to purulent ophthalmia in their infancy; hence it was not unreasonable to infer that, by the adoption of the means of prevention here suggested, the amount of blindness at present existing in this country might be diminished by one-third. With regard to the dressing of the umbilical cord, it was pointed out that the normal course of events was for the remains of the funis, after division and ligature, to dry and shrivel up, and for separation of the desiccated and dead tissue to take place within a few days, leaving a raw surface analogous to the placental site on the inner aspect of the mother's uterus, and liable, like it, to be a channel for septic absorption. The objects to be aimed at, therefore, were to secure (1) the normal desiccation of the cord before its separation, and (2) an aseptic condition of the wound left when separation has taken place. The method recommended was, after drying the surface of the cord, to powder it plentifully with powdered starch and wrap it in a square of antiseptic gauze. The umbilical wound should be dusted freely with finely-powdered boric acid, and covered with a pad of dry absorbent wool. Allusion was then made to the sectional arrangements, and especially to the considerations which had led to the selection of subjects for discussion. The address concluded with some remarks on the combativeness of the present race of gynæcologists, which was to be explained by the science of gynæcology being in its youthful stage. When our knowledge had a firmer basis, we should differ less.

On the termination of the President's address, Dr. Braxton Hicks opened a discussion on the treatment of Placenta Prævia, and recommended the following method: 1. After the diagnosis of placenta prævia is made, proceed as early as possible to terminate pregnancy. 2. When once we have commenced to act, we are to remain by our patient. 3. If the os is freely expanded and the placenta marginal, rupture the membranes, and wait to see if the head is soon pushed by the pains into the os. 4. If there be any slowness or hesitation in this respect, employ forceps or version. 5. If the os is small and the placenta more or less over it, carefully detach the placenta from round the os, and if no further bleeding occurs we may wait an hour or two; but should the os not expand, and if dilating bags are at hand, the os may be dilated. If it appears that the forceps can be admitted easily, they may be used; but if not, version by the combined internal and external method should be employed, and the os plugged by the leg or breech of the fœtus; after this is done, the case may be left to nature, with gentle assistance, as in footling and breech cases. 6. If the os is small, and if we have neither forceps nor dilating-bags, then combined version should be resorted to, leaving the rest to nature, gently assisted. 7. If during any of the above manœuvres sharp bleeding should come on, it is best to turn by the combined method in order to plug by breech. 8. When the fœtus is dead, or labor occurs before the end of the seventh month, version by the combined method, no force following, is the best plan. To these Dr. Brax-

ton Hicks added, if we employ a routine method in most cases, it will be found that version by the combined method, no force following, gives a result as good as, if not better than, any. As to after-treatment, act on modern principles. Should oozing occur after expulsion of the placenta, swab the lower uterus by styptics, and irrigate the uterus daily with some antiseptic solution, and particularly, if irrigation cannot be done, insert iodoform pessaries in the vagina. This is especially useful if the outlet of the uterus is blocked by adherent clots.

Dr. Murphy (Sunderland) strongly urged the necessity of realizing the extreme danger of leaving cases of placenta prævia to go on after they were once diagnosed, and wished to establish a rule that premature labor should be induced as soon as it is ascertained that the placenta presents, after the seventh month of pregnancy, and even before this should bleeding be serious or frequently recurring. He advised that the obstetrician should remain in constant attendance during the whole period of labor, which could be best induced by Barnes's bags, and then the question must be decided how further to conduct it. Generally separation of the placenta, full dilatation of the os, and bipolar version would give the best results. He submitted a table of thirty-eight cases, with two deaths; there had been a series of thirty-two consecutive recoveries included in this list.

The President read a letter from Dr. Lomer, in which he gave the greatest credit to Dr. Braxton Hicks for his method of treatment. He had treated twenty-eight cases by the combined method of turning, with one death of the mother and with thirteen living children. Putting together all the German statistics, there were one hundred and ninety treated by Dr. Hicks's method, with only nine deaths. Dr. Lomer's rule was as follows: Turn, and then wait; consider the case as being simply one of foot presentation, in which there is no other reasonable necessity to extract the child than the impatience of the operator. Should hemorrhage occur in the mean time, then naturally it is right to perform slight tractions on the foot in order to make the breech of the child tampon the bleeding parts; this traction ought, however, not to be a "hastened extraction."

Dr. Robert Barnes said, if he had been a German, probably what was now called Bandl's ring would have been styled Barnes's boundary line, as he had long ago described it as the boundary line of dangerous hemorrhage, which must be dilated to allow the child's head to pass. He recommended (1) puncture of the membranes, (2) separation of the placenta, (3) dilatation of the os by his rubber bags, and (4) forceps or turning according to the circumstances present. He said the prophylaxis of placenta prævia was of importance, as this complication was liable to recur. Attention should be given to the endometrium, so as to get it into a healthy state.

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*COCILLANA IN DISEASES OF THE LUNGS.*

In the Therapeutic Gazette for August 15, 1888, we published a paper by Dr. H. H. Rusby on the use of cocillana bark in catarrh. Dr. Rusby's results indicated that the cocillana bark was a powerful emeto-cathartic and expectorant, very similar in its effects to ipecacuanha, and dangerous when taken in large doses. Dr. Rusby was, unfortunately, prevented from continuing his researches, but his work has led to the investigation of the properties of this plant by Dr. David H. Stewart, who has published his results in the *Philadelphia Medical News* for August 24, 1889.

Dr. Stewart states that he has notes of forty cases in which cocillana was prescribed. These comprise ten of acute, one of subacute, and nineteen of chronic bronchitis, five of broncho-pneumonia, and five of phthisis. Of these cases, the shortest time that any were under treatment by cocillana was six days, and the longest twelve weeks. While he further adds, that in many of the cases other drugs had been unsuccessfully tried before cocillana was begun. In bronchitis, the results, indicated by the notes published, did not appear to have been very satisfactory, the drug appearing to have but little effect on the disease.

In chronic bronchitis the results were more satisfactory, five cases being cured, while three were decidedly and two moderately benefited. All of the four cases of broncho-pneumonia were improved as regards cough and expectoration, while the only case of phthisis appeared to be uninfluenced by the use of cocillana. In all of the cases treated it was stated that where cough was not removed, it was lessened, while expectoration was either diminished in amount or frequency, while it is further stated that in cases where expectoration was difficult before cocillana was begun, it became less so under the use of this drug. In two cases slight temporary nausea was produced by the use

of the drug, while in three of the twenty-one cases it was noted that the bowels were somewhat looser while cocillana was being taken. Dr. Stewart concludes, from analysis of his cases, that cocillana is serviceable in bronchial catarrh, especially the subacute and chronic forms, when accompanied by scanty or moderately profuse secretion, whether the cough be tight or loose. It seems to possess the power to render cough less frequent and difficult, and the bronchial secretion less viscid and more easily expectorated, while at the same time it diminishes it in amount.

Perhaps the best preparation of cocillana for administration is the fluid extract, because of the relative smallness of the dose; seven and one-half minims of it equal about half a fluidrachm of the concentrated tincture. The fluid extract is to be preferred to the tincture in cases of acute bronchitis, since the amount of alcohol contained in the latter is apt to aggravate the inflammatory condition. In cases of chronic bronchitis, broncho-pneumonitis, and the bronchitis intercurrent with phthisis, the tincture is not open to this objection. The dose of the concentrated tincture employed in most of the cases is somewhat too small, an average dose equalling about three-fourths to one fluidrachm.

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*SULPHOLINIC ACID AS A SOLVENT.*

This acid is obtained by the action of sulphuric acid by a complex chemical process on vegetable oils, and is rendered neutral by repeated washings with a solution of chloride of sodium and ether. When concentrated it presents the appearance of a yellowish liquid, with a neutral reaction; a taste at first sweet, then bitter and astringent. Its specific weight is 1023. It is soluble in all proportions of alcohol, and miscible with one to two parts of water without losing its oily character. Dissolved in a large quantity of water, it forms a clear liquid, slightly opalescent, and remarkable for its great affinity for water. It does not decompose, even when heated for some time up to 100° C. At a temperature below 0° C. it is converted into a yellowish mass, which resembles vaseline. It combines with a great number of various substances, which are then either completely soluble in water, or readily form emulsions; such, for example, as ether, chloroform, benzine, terebenthine, bisulphide of carbon, oil of mustard, and all the etherial oils. Heated, or submitted to ebullition, it dissolves numerous organic and inorganic substances, such as sulphur (two per cent.), iodoform (three per cent.), camphor (twenty-five per cent.), naphthalin, chrysophanic acid, and numerous coloring-matters. These solutions readily penetrate the skin, which completely and rapidly absorbs them. It is thus seen that sulpholinic acid possesses remarkable properties as a solvent, and it is superior to vaseline, oleic acid, glycerin, and other vehicles commonly prescribed for external use. In reply to the statement that sulpholinic acid is a "universal solvent," we might inquire, In what can it be kept?—*Journal de Médecine de Paris*, August 11, 1889.

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*ANTACID REMEDIES IN DYSPEPSIA AND GRAVEL.*

At the recent meeting of the British Medical Association (*Lancet*, August 17, 1889), the President of this Section, SIR WILLIAM ROBERTS, gave an address upon "Some Practical Points in the Use of Antacid Remedies in Dyspepsia and Gravel." He remarked upon the great change which had taken place in the minds of medical men regarding the action of remedies. Forty years ago the leading minds of the profession seemed to have regarded with a sort of despair any hope of seriously influencing the issues by the use of drugs. Some of them even gloried in a course of *laisser aller, laisser faire*, and turned their attention entirely to a study of the natural history of disease and the minutiæ of morbid anatomy. Now all this was changed. A more exact investigation of the fundamental action of drugs on the tissues and organs, and the discovery of the remarkable correspondence which has been found to exist between the chemical composition of substances and their physiological effects, have given a new and extraordinary impetus to therapeutical studies. Sir William Roberts went on to say that there were few simpler problems than those relating to the palliative treatment of acid dyspepsia and the chemical prophylaxis of uric acid gravel, but there were some practical points in carrying out the treatment which were neither simple nor well known.

Antacid agents might be classified into those which were designed to take effect in the stomach, or gastric antacids, and those which were designed to take effect in the kidneys, or renal antacids. The gastric

antacids in common use consisted of the alkaline and earthy carbonates and lime-water. Renal antacids combined, in addition to these, the acetates and citrates of potash and soda, which were changed in the primæ viæ into carbonates of these bases. Gastric antacids were employed in two distinct classes of cases,—namely, in acid dyspepsia, and in a variety of conditions characterized by great irritation of the stomach, often with vomiting, which we sought to allay by the administration of milk mixed with lime-water. For acid dyspepsia the lozenge was the best mode of administration of an antacid. The Pharmacopœia had two lozenges of this kind,—the troch. sod. bicarb. and the troch. bismuthi. The latter was to be preferred. It owed its antacid properties to the chalk and magnesia which it contained, the bismuth being probably inert. Many lozenges sold in the shops contained pungent spices which were very injurious. The Vichy lozenges were valuable, but rather costly. It was well to vary the antacid from time to time. The question might now be put, Is there any harm in the practice of habitually using antacids for the relief of acid dyspepsia? He had naturally at one time regarded the practice with misgivings, but a more extended experience had led him to believe that it was harmless. He used the bismuth lozenge largely, but with the following precautions: They were not to be used at or near meal-times; they were not to be used regularly or systematically, but only when gastric pain was present and produced real discomfort; lastly, the use of the lozenge was to be discontinued if it failed to cut short the pain. Lime-water and milk was a favorite remedy, and often very successful. It sometimes failed, owing to the very low saturating power of lime-water. It was often desirable to substitute a solution of from five to ten grains of bicarbonate of sodium per ounce for the lime-water. The use of renal antacids rested on an equally rational basis. To prevent uric acid gravel forming we had only to keep the urine alkaline; but, simple as this was, there were some practical difficulties in the way, owing to the persistence of the tendency to the uric acid formation. It was very important to remember that this tendency did not last throughout the entire twenty-four hours, the necessary conditions being only present during the hours of sleep. It followed that if we safeguard the night, the day might generally be left to take care of itself. In the milder cases a full dose of the alkalizing agent at bedtime was sufficient. The citrate of potash was the best preparation. The dose for an adult should not be less than from 40 to 60 grains, dissolved in three or four ounces of water. In severer cases a second dose should be taken about the middle period of the hours of sleep. In still more severe cases additional doses might be required, but usually only temporarily. The essential point in the prophylactic treatment of uric acid was to guard the urine from precipitating within the precincts of the kidney. An antacid which was too feeble to render the urine actually alkaline might postpone the time of precipitation.

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### *EXCISION OF THYROID IN GOITRE.*

According to the Vienna correspondent of the *Medical Press and Circular* of August 21, 1889, Dr. Puky, Buda-Pesth, has recently removed six goitre tumors with success by partial excision. It may be remembered that surgeons have not been successful in the past in the total removal of the thyroid gland, although at one time it was assumed as a logical operation, and strumectomy recognized as a surgical term. Before this had been long adopted it was found that total removal of the thyroid gland produced a cachexia, which went by the appellation of cachexia strumapriva, or, more properly, cachexia thyropriva. This cachexia thyropriva appears about a month after the excision of the gland, and after the wound has healed, in the form of a general illness, accompanied by a number of changes, as swelling of the face of a yellow, wax-like color, and the patient's movements give one the impression of an idiot. Later on, the legs and arms begin to swell, the surface of the body becomes dry, swollen, soft to the touch, no perspiration, the hair dry, accompanied by shivering. When these symptoms are coming on, the patient feels the legs and arms weak, with a cold, crawling sensation in them, while the general activity of the body is reduced. Muscular paralysis, or atrophy, sets in, but the most remarkable symptom is the slow, clumsy mode of speech, which the patient attributes to his tongue being too thick and heavy.

With this change of the body the brain equally suffers. The patient becomes dull and apathetic, mental activity becomes lost, and he complains of his sight and hearing. The internal organs give no indication of change. The chronic cases observed resemble an accentuated state of anæmia, except that the white

blood-corpuscles are increased, while the number of red corpuscles are diminished. What the real cause of this train of symptoms is due to has puzzled inquirers and physiologists to explain. It is to be observed that this cachexia thyropriva takes place as commonly after the removal of a cystic goitre as after a parenchymatous goitre, without any relation to the magnitude of the operation, the blood lost, or the healing process of the wound. But when the gland is partially removed, these symptomatic phenomena are absent, which forces us to conclude that the removal of the gland disturbs the hæmogenic function of the blood. But it would appear that this functional change is not similar to that performed by the spleen or the marrow of bone, else these functions might be increased to such an extent as to carry on a fairly normal condition of the body. It is also remarkable that, after thyrectomy, no one has observed either any enlargements about the spleen or leukæmia. Dr. Credé supposed that after removal of the spleen the hæmogenic function was carried on by the thymus gland, as it was found in his cases where he had removed the spleen, that leukæmia soon appeared, and that four months after the operation the thymus gland became tender and greatly swollen, but that after the tenderness and swelling disappeared the blood returned to its normal condition. From this Credé inferred that there was a reciprocal function between the spleen and the thymus gland. How far we can follow these hypotheses is very doubtful, but it is evident that the thymus gland has some direct or indirect function in the hæmogenic process of the organism, but whether the function is confined to the selecting of material from the blood which it elaborates or transforms, or whether it appropriates a particular product of the hæmatic fluid which is indispensable for the proper nutrition of the nerve system, is not yet clearly understood. From the fact that the cachexia thyropriva phenomenon does not appear immediately after the operation of thyrectomy, but coming on weeks and months after, and approaching gradually, leads many authors to believe the disorder to be of a nervous character rather than hæmatic. Puky now carries us farther into a maze of probabilities, and assures us that myœdemas also produce this cachexia thyropriva, as the thymus gland becomes reduced, in some cases almost disappears.

He related two cases of myœdema observed by Dr. Ujfalussy, where, in one of the cases, the thymus gland was greatly enlarged, but Puky thought this case more properly belonged to the acromegalia, which was closely allied to myœdema, as the former is more prone to attack bony processes. In accordance with this knowledge of the thymus, he conducted his operations with the object of removing only part of the enlarged thyroid gland, in which he was successful in averting this cachexia thyropriva. All the cases healed within twenty-four days, and are doing well.

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### *THE DIURETIC POWER OF CAFFEINE WHEN ASSOCIATED WITH PARALDEHYDE.*

Impressed by the results obtained by Von Schröder as to the diuretic action of caffeine, CERVELLO tested the diuretic powers of the combination of caffeine and paraldehyde in the case of a man, 40 years of age, suffering from immense intraperitoneal effusion produced by venous congestion from heart-disease (*Schmidt's Jahrbücher*, August 15, 1889). As a result of the administration of this combination the amount of urine was more than doubled and the ascites markedly reduced. The same combination was also employed in the case of a man, 22 years of age, likewise suffering from œdema and dropsy, as a consequence of heart-disease, and in cases of chronic nephritis with œdema the diuretic action was also very pronounced, and resulted in the removal of the effusion. Finally, notes are published of a case of sero-fibrinous pleurisy with abundant exudation, but with no tendency for reabsorption, in which the combination of paraldehyde with caffeine produced disappearance of the effused liquid. The paraldehyde was given in capsules, 30 to 45 drops in two or three doses at evening, so as to combine the sleep produced by paraldehyde with the natural sleep. Caffeine was given in doses of from 4 to 8 grains. In case of ascites from cirrhosis of the liver, in accordance with general clinical experience, caffeine failed to produce any diuretic effect.

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### *THE TREATMENT OF ACNE AND ITS ETIOLOGY.*

M. BARTHELÉMY, of Paris, introduced the subject of the etiology and treatment of acne at the meeting of the International Congress of Dermatology and Syphilography, recently held in Paris. He alluded to the fact that, while it was well known that the ingestion of improper food, or a simple indigestion, gave

rise to certain cutaneous eruptions, such as urticaria, etc., he believed that a form of acne might have a similar origin (*Medical Press and Circular*, August 28, 1889). M. Bouchard published some time ago a work on the troubles of digestion and upon certain auto-intoxications, the consequence of dilatation of the stomach, and in it he says that these conditions provoke a form of acne which he (Barthelémy) had observed very frequently within the last five years, the period during which he has studied the question closely. Out of one hundred and sixty-nine cases of acne he had discovered dilatation of the stomach one hundred and sixty-five times. The treatment should be directed, of course, to the removal of the cause. Laxatives, such as cream of tartar and prepared chalk should be given, also tonics, and even cod-liver oil. Gastro-intestinal fermentation should be controlled by chlorohydric acid, pepsine, etc. The skin should not be neglected, sulphur-baths taken twice a week, rubbing with black soap, and finally with spirits of camphor, or some certain antiseptic ointment.

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### *THE INFLUENCE OF BROMIDE PREPARATIONS ON MENSTRUATION.*

In the *Wiener Medizinische Blätter* for August 1, 1889, Dr. M. Ernst calls attention to a fact which has, perhaps, been already frequently observed by others, that bromide preparations, especially bromide of potassium and bromide of sodium, exert a marked retarding influence on the periods of menstruation. He reports, as illustrative of this statement, the case of a young girl, 18 years of age, who was under treatment for epileptic convulsions. For the four previous years she had menstruated regularly, and, according to the mother, the first epileptic attacks occurred when she was six years of age, and since puberty the intervals between the convulsive seizures had been rapidly decreasing. For the last few months the patient had been taking thirty, and then later forty-five, grains of bromide of sodium daily, with the result that the attacks appeared at much longer intervals, and were much milder in character. At the same time it was noticed that the menstrual periods, instead of occurring perfectly regularly as before, now occurred only every five or six weeks, and sometimes eight weeks elapsed before the reappearance of a period. A second similar case is also referred to, likewise that of an epileptic woman, in whom again the menstrual periods were retarded in their appearance under the influence of the bromides. These cases seem to prove that the interference with menstruation was not attributable to the epilepsy itself, but seem to show that it was directly due to the action of the bromides. Further observations are desirable to determine whether this result is accidental, or whether it may be expected to follow prolonged use of the bromides.

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### *PEROSMIC ACID IN EPILEPSY.*

Dr. Carl Schrœder has administered perosmic acid to eight cases of epilepsy, in doses of $\frac{1}{6}$ of a grain daily in pill form, and has published his results in his inaugural thesis presented before the University of Kiel.

His results show that the value of perosmic acid in the treatment of epilepsy is negative. He administered it in eight cases, not one of which can be regarded as cured. Two were somewhat improved, while in the other six no action whatever was perceptible. Dr. Schrœder suggests that, perhaps, if the treatment had been more prolonged, the results might have been somewhat more favorable, since his results are by no means as satisfactory as those of others who have experimented with this drug in epilepsy.

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### *THE TREATMENT OF NIGHT TERRORS IN CHILDREN.*

Nearly all practitioners have seen numerous instances occurring in children from 2 to 10 years of age, who wake up once, or oftener, during the night in a state of extreme terror, of apparently the most causeless nature. In these cases the children will almost, if not always, be found to be of an inherited nervous temperament, or, it has been stated, that a common cause of this condition is the abuse of alcoholic liquors by the wet-nurse. Ollivier (*Revue Mensuelle des Maladies de l'Enfance* for August, 1889) attributes the condition, almost without exception, to a developing form of hysteria, claiming that in ninety-nine out of one hundred cases such will be the cause. This seems somewhat exaggerated, but the advice of Ollivier to treat all such cases as of a truly nervous origin is worthy of attention. A warm bath given at bedtime, or 7½ to 15 or 30 grains of bromide of potassium and sodium,

or some preparation of valerian, chloral, or antipyrin, will nearly always succeed in quieting the patient. Opium, however, or any of its derivatives, is absolutely contraindicated.

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*TREATMENT OF CANCER OF THE RECTUM.*

At the recent meeting of the British Medical Association (*Lancet*, August 17, 1889), MR. JESSOP, the President of this Section, introduced a discussion upon the "Treatment of Cancer of the Rectum." As regards the treatment of cancer by drugs, his attitude was one of hope and even faith in the future, but absolute distrust in the past. Some Pasteur of the future might yet discover a cure for cancer, but the claims put forward for China turpentine or any other drug rested upon the slenderest of foundations. Cancer never yet was cured, although medicines might give great relief. He passed on to operative treatment of cancer of the rectum. Partial removal was rarely advisable and barely scientific. He would deal only with proctotomy, which, of late, had been forced into prominence by the success of German operators. His own experience was limited to seven cases. One died in a few days; the remaining six obtained a varying amount of relief. All were still alive, one apparently well, at the end of twenty-one months; a second equally well at the end of seventeen months; a third had a speedy return of the disease, which now threatened to end fatally; two others were still well at the end of five months and twenty-six weeks respectively. In four of the cases the results had been almost all that could be desired, and incomparably better than those of the most exceptional colotomy. He had not yet attempted the removal of cancer when beyond the reach of the examining-finger, nor had he advised the operation in any male in whom the disease was seated in the anterior wall of the rectum. In thin, wasted patients access might be got to the disease by expanding the sphincter by a modified Weiss's dilator, but in stout persons it was necessary to cut from the rectum deeply down to the coccyx. Much of the success of the operation depended upon the thorough cleansing of the wound, not only at the time of the operation, but during many subsequent days. In cases in which the disease had originated beyond the reach of the finger, or had crept up to a higher level, he thought the operation unsuitable. He spoke next of colotomy. His opinion was that in cancer of the rectum, obstruction was not much to be feared if the disease were in the lower half, but was almost certain where the upper portions of the rectum are involved. Of fifty-four cases of colotomy taken from his note-book, performed for the relief of distress, and not for obstruction, three only died in the first month. Given the diagnosis of cancer high up in the rectum, the duty of the surgeon is to recommend without delay the formation of an artificial anus. As regards cases of disease affecting the middle and lower portions of the rectum, he found that the average duration of life in those who were not operated on was a little over seventeen months, while that of those who underwent colotomy was twenty-two months and a half. His experience had gradually raised his estimate of colotomy as a means of prolonging life. As regards relief of suffering, his conclusions were that operation lessens pain, diminished the desire to evacuate, prevented incontinence of fæces, and reduced the number of motions. He had hitherto only performed the lumbar operation, but he was favorably impressed by the evidence in favor of inguinal colotomy.

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*A NEW OPERATION FOR THE CURE OF INCONTINENCE OF URINE.*

In the *Centralblatt für die Gesammte Therapie* for August, 1889, DR. GERSUNY reports the case of a girl, 14 years of age, who had suffered from incontinence of urine since birth, and who was cured by the following ingenious operation:

A crucial incision was made over the external orifice of the urethra, and through this the urethra was dissected free from the adjacent tissue up to the arch of the pubes. The urethra was then twisted on itself through a half circle, and stitched fast in its new position. As it was found that this degree of twisting did not produce relief, in two subsequent operations the procedure was repeated, until the urethra was twisted completely round through one and a quarter parts of a circle.

Four months after the operation the patient could retain her urine for five hours, and the cure was finally regarded as complete, with the single exception that the performance of the act was considerably slower than normal, three to four minutes being required to empty the bladder.

The author believes that such an operation will produce successful results in cases where the sphincter of the bladder is functionally inactive.

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*HOMERIANA IN TUBERCULOSIS.*

This plant, which belongs to the family of Polygonaceæ, has been employed by LASKOFT (*Journal de Médecine de Paris*, August 4, 1889), with some success in the treatment of tuberculosis. This plant grows wild in Russia, and contains an acrid irritating oil, which appears to be its active principle.

The author has prescribed a decoction or infusion of this plant in affections of the respiratory passages, and especially in bronchitis and tuberculosis. He affirms that of one hundred and twelve cases of tuberculosis he has produced great improvement in ninety, the improvement consisting in the reduction of temperature, diminution of expectoration, while physical examination revealed retrogression of the pulmonary lesions in cases of advanced tuberculosis.

The author claims that this plant will reduce night-sweats, cough, and expectoration. He administers 1 ounce of the infusion or decoction of the homeriana, to be taken diluted in twenty-four hours.

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*ANTIPYRIN IN RENAL DISEASE.*

In the *Lancet* for August 31, 1889, MR. M. H. FEENY reports the following case of Bright's disease, occurring in a married woman, aged 29. The patient had been in good health till two months previously. She was then seized with a diphtheritic sore throat, and was soon after ordered to Clevedon for change of air. On the journey she caught cold, dropsy quickly supervened, and she was admitted to the hospital on March 3. From this date till the following June the case was carefully nursed, and the routine *rôle* of medication was adopted. Still the malady made steady progress, and on June 14 the following condition was observed: There was extreme general dropsy,—the abdomen, face, and extremities distended, with dropsical effusion; great pain in the back, especially the lumbar region; intense headache; failing vision; heart action weak and irregular; difficulty of breathing, owing probably to a pushed-up diaphragm and pleural effusion; skin sallow, tense, and shining; urine scanty, of high specific gravity, and loaded with albumen; anæmia and general prostration. The condition of the eyes was very characteristic, the lower lids forming two distended translucent pouches. But the state of the ocular conjunctivæ was very striking. These were, to a large extent, raised from the sclerotic in transparent bladders of effusion, producing the condition called chemosis, and seriously endangering the circulation of the cornea.

Mr. Feeny then decided on testing the use of antipyrin, principally with the view of relieving the distressing headache, and ordered 3 grains twice a day, with strict injunctions to observe carefully the action of the heart. The need for this precaution was quickly demonstrated by increased irregularity, fainting, etc. On the third day the dose was reduced to 3 grains daily. From this date general amelioration of the symptoms was observed, and constant steady progress reported. After a few days a tonic supplemented this treatment, and in the course of three weeks a great change was observable; the dropsy was much less, the intense headache relieved, the appetite improved, and the patient much brighter and more hopeful. By the beginning of August she was up and about, visiting her friends. All traces of dropsy had disappeared, the general health was good, and there remained only a small quantity of albumen in the urine. On August 13 she was discharged for a convalescent home.

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*ACETO-TARTRATE OF ALUMINUM.*

HOLSTE recommends this salt as being non-poisonous, and yet caustic, disinfectant, and antiseptic (*Revue Générale de Clinique et de Thérapeutique*, August 8, 1889). He has employed it as a light local irritant in various affections of the nasal fossæ, face, pharynx, and larynx. It is a powder which is soluble in water, insoluble in ether, alcohol, and glycerin, while a slight deposit forms sometimes in this aqueous solution. In contact with the mucous membrane, the salt produces within half a minute a superficial cauterization, accompanied by an effusion of serum. It may be used as a local application, mixed with an equal part of boric acid or some inert powder, or it may be applied on cotton, soaked with twenty to twenty-five per cent. solution in water.

The author claims that through its use he has obtained good results in treatment of nasal polypi, ozæna, and chronic hypertrophic

rhinitis. Applied to the nasal mucous membrane, it produces some coryza, headache, and momentary olfactory anæsthesia.

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*BROMOFORM IN WHOOPING-COUGH.*

Dr. Stepp, of Nürnburg, publishes in the *Deutsche Medizinische Wochenschrift* a large number of cases of whooping-cough, in which he claims to have obtained most satisfactory results from the internal administration of bromoform. The drug has, according to the author, no ill effect of any kind, and his numerous observations have proved that bromoform, as applied by him, is non-poisonous, and that the pulse and temperature remain unaffected by it. The action of bromoform is entirely different from that of bromide of potassium, as has been observed in epilepsy, the former being rather an excitant than a sedative. Children are ordered from five to twenty drops during the twenty-four hours in very frequent doses. The solubility of bromoform in water being very slight, the mixture requires the addition of alcohol. The author has administered bromoform in about sixty-five cases of whooping-cough, the children mostly ranging in age from 6 months to 7 years. The longest time required for a complete cure was four weeks. Symptoms of pulmonary catarrh in all these cases were entirely absent, or else they were very slight and soon disappeared. No complications existed in any of the cases observed by the author, but Dr. Goldschmidt has treated several serious cases of whooping-cough complicated with pneumonia, completely curing them in a fortnight by the daily administration of bromoform. Dr. Stepp concludes from his observations that under bromoform treatment bronchial catarrh and lobular pneumonia do not generally occur, and that where they exist at the commencement of the treatment, resolution takes place with facility and at an earlier period than under other methods of treatment. His observations showed also that the dose of bromoform must be in direct proportion to the severity of the affection and the age of the patient. The system does not seem to become accustomed to the drug, which has, moreover, considerable prophylactic power, so that the other children of a family in which whooping-cough in an advanced stage already exists can be shielded from the disease by being given bromoform. Dr. Stepp believes that bromoform is either excreted unaltered by the lungs or is separated into its elements, and that the free bromine is excreted by the lungs. In this way an effect on the bacilli of whooping-cough could be easily supposed to result.—*Lancet*, August 24, 1889.

## Reviews.

The Medical and Surgical History of the War of the Rebellion. Part III., Vol. I. Prepared under the direction of the Surgeon-General, United States Army, by Charles Smart, Major and Surgeon United States Army.

This great quarto volume completes, we believe, the medical and surgical history of the War of the Rebellion, a history whose growth has been prolonged over a period of nearly a quarter of a century, and has been marked by the death of two of its authors, men who will for all time rank high in the annals of the American medical profession during the present half-century.

Dr. Smart, called to take up this labor, found an immense mass of record to be digested, and found also that these records were in many cases incomplete, that they were observations upon common and well-known diseases, and that they were the records of methods, more or less, at present out of vogue, therefore more or less lacking in interest to the general profession. As an instance of this, take the subject of typhoid fever. The best treatment of typhoid fever during the war was that which confined itself to the regulation of food, the administration of stimulants, and occasionally a few drugs, to meet symptoms as they arose. Among these drugs it is interesting to find that turpentine held so prominent a place, and that there was almost a universal feeling in its favor. It may be asserted that this is due to the great personal influence of the late Dr. George B. Wood; but we think that the unanimity of opinion is a very strong evidence that the remedy is of value, being especially inclined to this belief by the fact that our own experience is very positive in this regard.

There are two conditions of the fever in which turpentine is invaluable. One state arises in the end of the second week, when the tongue is heavily glazed, and there is abdominal tenderness, and sometimes excessive diarrhœa. The second period is during the convalescence from the fever, when lack of digestive power and a general failure to make strength indicates the presence of the intestinal typhoid ulcerations. The reviewer

is firmly convinced that under each of these conditions the oil does good by acting locally upon the affected bowel.

If medical art had developed more early, or the war had developed more late, in the annals of time, the present volume would be much more interesting than it is. What opportunity was afforded, for instance, for a perfect testing of the frigorific treatment of typhoid?

Probably the most interesting portions of the book to the general non-military reader are those in which are discussed the development of diseases and various problems of preventive medicine. Thus, in regard to the origin of yellow fever, Surgeon F. H. Bache says: "Was the exemption from yellow fever due to quarantine or to the cleanly condition of the city, or to both? Following La Roche and others, I was not originally in favor of establishing a quarantine to keep out yellow fever. By originally I mean prior to the summer of 1862. My views were changing about that time, chiefly on account of the exemption of New Orleans from the disease during the summer of 1861. This I was inclined to attribute to our blockade, which was the strictest sort of a quarantine. During that summer the city was as dirty, if not dirtier, than usual, owing to the war; the ditches for artificial drainage were obstructed on our arrival. Moreover, the epidemic was 'overdue,' as they say."

The difference of disease in the white and colored races is very marked. Thus, the death-rate among the negroes from scurvy was nearly double that which existed among the white troops.

The most distressing page in the history of America is that connected with the treatment of the Union troops in the Confederate prisons. In the present volume the sickness and mortality among these troops, as well as the prevalence of disease among the Confederate troops in the United States prisons, is fully discussed. It seems to be established that, while the annual death-rate among the Confederate troops in the field was 4.4 per thousand, among the same troops in the United States prisons it was 5.2 per thousand. On the other hand, at Andersonville prison during six months seven thousand seven hundred and twelve deaths occurred among an average number of nineteen thousand four hundred and fifty-three Union soldiers, equalling an annual rate of 792.8 per thousand,—a death-rate which would produce the extinction of the whole mass of troops in about fifteen months. That this great death-rate was in great part preventable is shown by the fact that diarrhœa, dysentery, and scurvy occasioned three-fourths of the mortality,—scurvy, in the words of Dr. Smart, being "the chief executioner." In the records of the United States prisons the three diseases named have not occurred prominently as cause of death.

Time and space are wanting in which to dip more deeply and more frequently in the great volume that lies before us. We must, however, call attention to the discussion as to the cause of typhoid fever, as it seems to us fully shown that the disease may arrive *de novo*, without the importation of the germ from the human body. In conclusion, we congratulate Dr. Smart upon the completion of his great task, and place upon our bookshelves the cap-stone of the monument which has been erected through the liberality of Congress and the labors of the medical profession to the memory of a fratricidal strife, from the fortunate results of which the whole American people are reaping their great prosperity.

INEBRIETY; ITS ETIOLOGY, PATHOLOGY, TREATMEMT, AND JURISPRUDENCE. By Norman Kerr, M.D., F.L.S., etc. Second edition.
London: H. K. Lewis, 136 Gower Street, W. C., 1889.

The world is filled with inebriety. Social order, comfort, and decency are all outraged by it. Yet the world continues still to deal with it in a half-hearted, utterly mistaken way, based upon certain theories that it holds, which were long ago disproved. Either the inebriate is repressed by legislation, or the offending substance—alcohol—is limited or proscribed, with all who deal in it, while sound medical science asks in vain for an opportunity to prove the truth of its theory and the wisdom of its plan. For the inebriate, in the true sense of the term, not the roysterer or the convivial drinker, but the being who makes most of the social disorder, who furnishes the "horrid example," who is so brilliant when sober, such a wreck when drunk, who pledges and promises, and returns to his "wallowing in the mire," is the subject, either by his own course of life, or by direct or indirect inheritance, of definite, real, physical disease, and as such demands of society the opportunity and means of cure. Imprisonment will not cure him, penal enactments will not prevent his ancestors from having given him a neurotic constitution. We must build up rather than weigh down, and this is fully recognized by the medical profession. Yet

the law only here and there makes it possible to carry on any systematic treatment. He is far worse off than the acknowledged lunatic, or those who are manifestly sick. Yet he suffers as often for the sins of the past and the social sins of the present, as the typhoid case or the tuberculous one.

Should any one doubt this, we are convinced that a study of the facts, statistics, and arguments of Dr. Kerr, as presented in this work, will convince him, if capable of being reached by any facts; in short, if he be not suffering from the neurosis of fanaticism, which also, far oftener than we imagine, is a direct inheritance from a by no means lofty source. The same strain to a remarkable degree runs through the constitution and mental character of the inebriate and fanatic. The same inherited taint that makes one succumb to alcohol leads the other to fight it, rationally or irrationally, with a blind yet desperate instinct against it, just as powerful and as unexpected as the inebriate's mad craving for it. Fortunately, perhaps for us, the children of the mentally unstable, the physically exhausted, may furnish the two extremes, the social bane and social antidote,—the sot and the temperance zealot,—who scorns all by-roads, all expediency, and demands the radical remedy,—the removal of all alcohol. Let the arts suffer, let the sick perish, alcohol, in his opinion, is always useless, always deadly. No arguments move him, no considerations divert him from his radical course. But he forgets that the craving and depression, the weak will, and the demand for so-called stimulants of some kind, existed before the supply, and will exist after its abolition; that the real inebriate has many resources; that when his main reliance cannot be obtained, though for a short time, he may pause, yet soon some other agent, be it opium or chloral, the bromides, or even other drugs, which we consider blessings in their moderate use, will take its place, and be used to satisfy the same inordinate appetite.

Dr. Norman Kerr has given us a strong plea in this book for such legislation as will make possible the cure of the inebriate. He has looked up all the legislation of recent years in Europe and America, and one can see how half-hearted it is where it exists, and in how many places, alas! there is no provision by which the inebriate can be restrained at all. Even where the law gives the power to establish suitably supervised inebriate sanitariums, the time during which restraint can be exercised is far too short to effect a cure. The bad work of years, to say nothing of past generations, cannot be undone in a few weeks or months. England has, of late, obtained some enactments, good as far as they go; but the United States is woefully deficient in anything of the kind. And, even with useful laws on the subject, public sentiment needs educating up to the point where it will realize their value as well as their necessity. To this task Dr. Kerr's work is principally addressed, and we trust it will open the eyes of many readers to the real facts of the case. E. W. W.

## Correspondence.

### PARIS.

(From our Special Correspondent.)

The Absinthe Controversy—Mme. Marie Huot—Thallin losing Favor—Cocaine as a Local Anæsthetic—Fire in the School of Medicine—Iodoform Elimination.

The absinthe controversy is still going on. Last month, it will probably be remembered, Drs. Cadéac and Meunier presented to the Academy of Medicine an elaborate memoir, wherein they denied the poisonous properties generally attributed to oil of wormwood, and concluded in charging oil of anise seed with all the accidents befalling absinthe drunkards. To support their views, they quoted a considerable number of experiments, both on men and animals, the results of which were briefly related in the last number of the THERAPEUTIC GAZETTE. Owing to the importance of the subject, and the subversive, not to say revolutionary, nature of the conclusions,—in a medical sense,—the memoir was referred by the Academy of Medicine to a committee, headed by Dr. Laborde, with instructions to investigate the matter. At the sitting on October 1 he read the committee's report, which is in direct opposition to the memoir's conclusions. As a decisive refutation, Dr. Laborde proceeded to perform before the Academy a comparative experiment on two guinea-pigs, twin brothers and exactly alike in weight, with 1 cubic centimetre (16 minims) of oil of wormwood on one side and the same quantity of anise on the other. As the first animal was soon taken with convulsive and epileptiform symptoms, which ended in death within an hour, while the second only remained sleepy and curled up in a corner, Dr. Laborde considered it a proof of the doctrines hitherto gen-

erally accepted respecting oil of wormwood. To explain the strange benignity observed by Drs. Cadéac and Meunier, he suggested they had been operating, not with the true oil of wormwood, but with some Algerian variety or substitute which is probably far less poisonous. Finally, he presented to the Academy the following conclusions: 1. Oil of wormwood is the poisonous ingredient of the compound cordial or bitter known as absinthe. 2. It is a dangerous error to give the name of beneficent and corrective to the fundamental principle imparting to absinthe both its name and dangerous properties. 3. Absinthe, like similar bitters, such as vermouth, etc., made with low-grade spirits, are by nature unwholesome, and dangerous to public health. 4. The term "absinthism" is, and should remain, characteristic of this deleterious effect, which, together with the toxic action of alcohol, "alcoholism," constitutes the two great plagues of public health, against which on our part war should never cease. The report's conclusions were unanimously adopted by the Academy with loud cheering. Yet our period is one of irreverence. Notwithstanding the decree of so august an authority as the Academy of Medicine, more than one scientist finds fault with Dr. Laborde's reasoning. Pharmacologists blame him for assuming Drs. Cadéac and Meunier's oil of wormwood to be bad and Algerian, and his own the genuine and pure stuff. Some chemical analysis, or examination at least, was an indispensable preliminary to all physiological experiments. For that matter the three doctors fare pretty much alike in their estimation. When Drs. Cadéac and Meunier say they made experiments with star anise oil, how did they know the product contained none of the poisonous oil of the *Illicium religiosum*? The fraud is a common one nowadays. The whole argument, for or against, is built on sand, and amounts to nothing. On the other hand, some physiologists merely chuckle, and say the guinea-pig experiment proves nothing, as the oils were introduced hypodermically, and the absinthe drunkard does not take his that way; besides, they add in a whisper, he is another sort of pig. But this is not all. As you know, in Paris there is always a funny side to every question. At the Academy sitting, when Dr. Laborde began to operate on the guinea-pigs, a lady in the audience suddenly rose, and began a vehement speech against such useless cruelty to innocent animals. Some cheered her, others protested, and many laughed, but such a disturbance ensued that the proceedings had to be suspended and two ushers sent to politely request the lady to leave, which she did with flying colors. After the little incident, the academicians, now used to her interruptions, went on with business. The fact is, she is quite a Parisian character, Mme. Louise Huot by name, a rather good-looking brunette, wealthy, and always most tastefully attired, whom no one would take to be the mother of a big whiskered young man, a head taller than herself. She is the president of some sort of an anti-vivisection society, the offshoot of the well-known British association, and never loses an occasion to publicly protest against the doctors' cruelty. On the occasion of the unveiling of Claude Bernard's statute she loudly hissed. At a College de France lecture she broke her umbrella over the head of the cruel lecturer, who was going to experiment on a live monkey. At a pro-Pasteur meeting she raised such a disturbance that gallant old De Lesseps, whom she had bitterly denounced for presiding, had to protect her out,—Panama had not failed then,—and escort her to her carriage. More recently, at the Alfort School, during a meeting of veterinarians, she almost rammed her legendary parasol down the throat of a professor who was proceeding to investigate an innocent hen. Her exploits are legion. But on the present occasion it must be conceded she was not wrong altogether. Dr. Laborde's experiment on guinea-pigs was of questionable usefulness, and quite out of place at a public sitting. However it may be, Mme. Huot is generally respected, and rather liked by Parisians, who could not spare her for the world. At the Therapeutic Congress she was present at most of the meetings, but found nothing to reprehend, much to the disappointment of foreign members, who, on seeing her, expected some amusing incident.

Speaking of organic poisons, for such they now seem to consider thallin, the once lauded medicament is daily losing ground in France. Dr. Albert Robin, of the Academy of Medicine, having observed that thallin will decrease general disassimilation, and especially that of albuminoids, increase the loss of sulphur and phosphorus-containing constituents, diminish the uric-acid excretion without lowering its formation, and interfere but little with noxious intestinal fermentations, has given it as his opinion that thallin is a poison of the blood globules, nervous system, and, in general, of all the tissues rich in sulphur and

phosphorus; it is a false and dangerous antipyretic, contraindicated in uræmic, arthritic, and nephritic affections, and its prolonged use will finally lead to anæmia and nervous debility.

Cocaine as an anæsthetic is another much-controverted therapeutic agent. Until some generally-accepted opinion has been arrived at, it is of interest to know what prominent surgeons think of the substance, and what has been their experience with it. At the Congress of French Surgeons recently held in Paris, and attended by many foreign doctors, who were warmly welcomed, Dr. Reclus highly spoke in favor of cocaine. He considers it a valuable anæsthetic not sufficiently appreciated, because its handling is not always well understood. "Cocaine," he said, "is applied both in lotions and hypodermic injections. The first mode is in many cases insufficient to produce lasting anæsthesia; yet I found them often serviceable when dilating the anal sphincter, or washing articular cavities with strong carbolic acid solutions. But the chief way is by means of injections into the tissues. Some say that cocaine is useless, others that it is dangerous. In my opinion both assertions are wrong, as I have up to this day performed more than seven hundred operations with the help of cocaine as an anæsthetic, and I never failed to obtain with it full analgesis, lasting for three-quarters of an hour, and sometimes a whole hour. One exception, however, should be noted: with bones analgesis is, if not impossible, at least exceedingly difficult. With tissues, normal or inflamed, the following precautions should be employed: The needle is first pushed into the derm, a few drops of the two per cent. solution being injected at the same time. It is, next, slowly introduced deeper in, while the injection is kept up at the same rate. In this manner, with a single syringeful, representing 20 centigrammes (3 grains), a quantity which need never be exceeded, an analgesic zone of two centimetres (four-fifths of an inch) in diameter is invariably obtained. The incision, which may be made with either the bistoury or the thermo-cautery, should be practised in the centre of the zone. Only, when the cautery is used, the operation is to be completed with one stroke, as heat seems to destroy cocaine, and a second incision would be painful. As regards the danger apprehended by some, no fear need be entertained, since no death from the alkaloid ever occurred with doses inferior to 75 centigrammes (12 grains). Besides, by this procedure, any vein accidentally met with would come in for a very small quantity of the solution."

While on the subject of the Surgical Congress, it may here be mentioned that, on the second day (October 8), just as the morning sitting was going to adjourn, the Paris Faculty's grand amphitheatre, where the surgeons met, caught fire from a defective heater. The members beat a hasty retreat, and made room for the firemen, who soon subdued the flames, a comparatively easy matter with Paris buildings, all made of solid blocks of stone, and no wood to speak of besides the furniture. Nevertheless, the damage done has been estimated at seventy thousand francs (fourteen thousand dollars), including three large paintings by Matout. The most important, sixteen by thirty-one feet, representing good old Ambroise Paré performing the first arterial ligature after amputation, was valued at four thousand dollars; the two smaller side pictures, illustrating hospital scenes, sixteen hundred dollars each. A marble bust of Hippocrat fell down, and was broken to pieces. The rest was mere material damage to wood-work and furniture. He knows Paris but little, however, who thinks a congress would come to an end because the meeting-place has burned down. The same afternoon our surgeons were provided with a better hall, just across the way, in the unfinished École Pratique. They were given the main amphitheatre, hitherto unused, twice as large as the one just cremated, and more convenient every way; and, better still, they inaugurated the new place without official speeches.

The elimination of iodoform has hitherto remained a disputed point, some holding it to pass unaltered through the kidneys, others maintaining it is in the economy oxidized into various iodides, and voided as such. This month, at a meeting of the Society of Practical Medicine, Dr. Choay gave it as the result of his investigations on a number of cases, that iodoform, when administered in any shape, always passes off as an iodide. To ascertain the fact he would shake the urine with ether, and on evaporating the solvent, never observe any trace of iodoform, while on operating in the same manner with a specimen containing 1 in 10,000 of iodoform, purposely added, the characteristic hexagonal plates could easily be identified under the microscope. On the other hand, in the urine of all the patients the presence of iodides could readily be detected. To which Dr.

Gautrelet replied the reason why opinions differ is because iodoform is sometimes decomposed in the economy, sometimes not. With patients like the arthritic, with urines more acid than in the normal state, oxidations are slow, and iodoform will be found unaltered; while with patients like the typhoid or the tuberculous, where oxidations are exaggerated and the urine acidity below the normal point, iodoform will entirely be burnt into iodides. This plausible explanation suggests a new and delicate mode of diagnosis for obscure affections.

PARIS, October 19, 1889.

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## LONDON.

(From our Special Correspondent.)

As a sign of the change which is coming over the study of therapeutics may be instanced the lectures given this year by Dr. Lauder Brunton before the Royal College of Physicians. It was at one time common to look almost with contempt at the investigation of the physiological action of a drug with a view to the treatment of disease. Such ideas are, however, fortunately, passing away; and they must do so, since the study of pharmacology has enriched medical art with so many useful drugs. Our forefathers were content to get their remedies from natural products; and, at the present day, we cannot afford to despise this source of drugs, for have we not received in this way quinine, morphine, salicin, and cocaine? But the modern pharmacology has introduced into medicine substances manufactured in the chemical laboratory, the supply of which is constant. Dr. Brunton's lectures dealt chiefly with the physiological action and chemical structure of such substances. Many of the results of the experiments of various observers which he mentioned may not be found to be of permanent value, but they indicate the direction in which the study of remedies is tending. We know a good deal now of the microscopical structure of the tissues, both in health and disease, and we are getting clearer ideas of the physiological and pathological functions of these tissues and organs. But there is very little known of the intimate changes occurring in tissues, and these changes are chiefly chemical. Modern pharmacology, instead of limiting its study to the general effect of drugs on the body and on separate systems (the circulation, etc.), is busying itself with the difficult and obscure subject of the action of drugs on tissues,—on the cell. Thus, as Dr. Brunton says, we are now investigating the pharmacology of the cell. Whether any practical result will come to medicine from such a study is impossible to assert. It can only be said that the knowledge that any particular chemical substance selects in its physiological action a certain tissue in a particular way, such as that of stimulation, etc., may be of service in indicating the use of that substance as a therapeutic agent when the tissue on which it acts is diseased. At the present time, however, this must be considered a somewhat utopian idea, and the practice of medicine is to a large extent empirical.

It is not only new drugs which are claiming attention; but it is evident that practitioners are beginning to recognize that very little is really known of old drugs,—those handed down from previous generations and now constantly in use. We might take as an example the spirits of nitrous ether. This is supposed to be, according to the British Pharmacopœia, a preparation containing alcohol, "nitrous compound, aldehyd, or other substances." The chief nitrous compound present is the nitrite of ethyl; but, as is now well known, the preparation is very uncertain in its strength. Professor Lusk, of Manchester, has shown that recent specimens of the preparation may contain two per cent. or more of the nitrite of ethyl, but old specimens may contain as little as a half per cent. Moreover, poor nitrous acid is present. It is obvious that a pharmaceutical preparation with such a varying composition would give very varied therapeutical results; and this is, no doubt, the case. Instead of it, Dr. Lusk suggests a three per cent. solution of the pure nitrite of ethyl in alcohol, instead of spiritus ætheris nitrosi. The dose of the solution is from ½ to 1 drachm. It is now a stock preparation constantly used in the Royal Infirmary at Manchester, and undoubtedly is very useful. It is of special service in cases of difficulty of breathing, due to disease of the heart or to bronchitis,—that is, in the so-called cardiac and bronchitic forms of asthma. In these cases the practitioner is often nonplussed as to what to give, and the solution of nitrite of ethyl may, therefore, be tried. No bad effect has been noticed with the solution in drachm doses; but it must always be remembered that nitrite of ethyl has the general effect of the nitrites in producing dilatation of vessels and a sense of fulness in the head. The solution has the disadvantage of

decomposing when prescribed with water, and it ought, therefore, to be mixed just before taking. This is, no doubt, a disadvantage. A drachm is written on the prescription, to be taken, perhaps, three times a day, and the chemist writes on the label a measured teaspoonful to be taken. This is the usual custom. Our ancestors may have had teaspoons holding only sixty minims, but the modern teaspoons certainly hold one hundred minims or more. A patient, therefore, who is ordered a drachm of solution of ethyl nitrite three times daily will take three teaspoonfuls, measuring altogether five drachms of the preparation. With potent drugs this is an important fact to bear in mind, especially as patients are often careless as to the amount of medicine they take, and are not likely to diminish the second dose if the first "does them good."

The British Medical Association moves with the times, and has this year made a grant of money to its therapeutical committee for carrying on pharmacological and therapeutical research. This committee, which owes its existence to Dr. Whitla's, of Belfast, suggestion, includes most of the leading therapeutists in Britain. The object of the committee is to obtain the results of the trial of drugs by practitioners in different parts of the town and country, so as to gain accurate information respecting them. The subject which the committee have taken up this year is that of hypnotics, chiefly those introduced during the last few years; and, by having the results of this trial of the drugs recorded in a uniform manner, the committee hope to obtain definite information as regards the utility of this valuable class of drugs. Whether their hope is a vain one or not, remains to be seen; but the experiment seems worth trying. It is not, of course, every one who does observe and record accurately; but there are few people, who, if they have the patience, cannot learn to be accurate observers. The committee do not propose to collect observations indiscriminately; but they will establish centres of observations in different parts of the kingdom, and the member of the committee (generally the professor at the neighboring college) will personally supervise the recording of the observations, or rather will be answerable for the scientific quality of his observers. There is no doubt that, if the scheme works well, a large mass of facts will be obtained, which will, perhaps, be serviceable in the therapeutical application of the drugs.

## *A NEW METHOD FOR LOCAL TREATMENT OF THE LARYNX.*

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—Owing to the prevalence of laryngeal diphtheria (membranous croup) in this vicinity and the futility of all treatment, I have concluded to present a new method of treatment, which, I think, is original with me. I have reason to believe it to be new and original, for I cannot find an account of a similar method after diligent research in all works treating the subject of diphtheria. Not having tested my proposed method as yet, and owing to its heroical tendencies, I thought it best to lay it before the readers of the THERAPEUTIC GAZETTE, thus giving the older and more experienced members of the profession an opportunity to judge as to its merits or demerits, hoping thus to receive an honest approval or a fair criticism of the proposed method.

This proposed new method consists in nothing more or less than a direct medication of the interior of the larynx by a variety of solvents to the diphtheritic membrane, not applied through the medium of a tracheotomy tube, or the appliances of the intubation method, but by means of a special needle and canula attached to a hypodermic syringe, this needle and canula being used to penetrate the larynx direct from without through the crico-thyroid depression and membrane.

The needle used for this purpose should be fitted accurately to the hypodermic syringe; it should be short and of a larger calibre than those ordinarily used, and somewhat stronger and very pointed, and have sharpened edges to facilitate its passage through the cartilaginous structures of the larynx. The canula to this needle should be made of some non-corrosive material (silver), should fit the needle closely, and be provided with a shield at its upper extremity, having a perforation on both sides, to serve as eyelets, to which stout silk threads can be attached for the purpose of retaining the canula *in situ* after having been once introduced, thus enabling the operator to make repeated injections of solvents, without necessitating a fresh puncture of the larynx every time. The point of puncture, in my opinion, is best made, as stated before, through the crico-thyroid depression and membrane. It should be made at the lowest part of this depression, and a little to the right side of the median line, to avoid puncturing the crico-thyroid artery. The needle should be slightly

slanted upward during its introduction, so that it would reach the interior of the larynx, but it should not be pushed up too high for fear of injuring the vocal cords.

The position of the patient should be on the back during the time of the puncture, with the head well depressed; in fact, it would be better to elevate the hips and inferior extremities during the entire treatment by this method, for the reason that by this the gravitation of the injected fluids would be towards the chink of the glottis, thus favoring expulsion of the detached membrane and mucus, instead of passing downward into the trachea. Occasional turning over, with face downward, in this position, would be favorable, in order to relieve the patient of a position which becomes irksome after some time, and also to favor better expulsion of loosened fragments of membrane. The injected solvents would also by this change of position reach every part of the larynx, which is very desirable; in fact, necessary. The best time to make these injections of solvents is undoubtedly during the stenotic stage (second stage). The injection should be repeated three or four times during every twenty-four hours, until no false membrane is renewed, or until convalescence is surely established. The canula may then be removed, and the minute opening closed with a piece of adhesive plaster; all traces of the puncture will disappear in a short time. The solvents most appropriate to be used in this method of treatment are, in my opinion, solutions of papain, or pepsin, or lactic acid, in a menstruum of pure, or nearly pure, glycerin. Sufficient muriate of cocaine should also be added to solutions of any of the solvents to average four or five per cent. in strength. From 5 to 10 minims of the solutions of solvents might be injected at a time without detriment, I think. The use of glycerin as a menstruum is not alone on account of its solvent properties, but also on account of its viscidity, this favoring adhesion of the solvents to the false membrane, and preventing to a great extent too much gravitation of the injected fluid. The cocaine is added to overcome the irritability of the larynx caused by the first injection and to lessen the pain subsequent to the puncture, also to prevent the irritation of repeated injections, and to lessen and prevent the spasmodic closure of the glottis interfering with the extrusion of detached pieces of false membrane. Of solvents proper, I consider papain and pepsin the best. They should be used in such strength as to effect their purpose,—*i.e.*, that of dissolving and detaching the diphtheritic membrane.

In conclusion, I will say that I consider *puncture of the larynx* worthy of a trial and of deserving a place as a remedial measure in the treatment of laryngeal diphtheria or membranous croup. It is not difficult to perform, nor is it a "*dernier ressort*" as tracheotomy, easier to effect than intubation of the larynx, does not interfere with other plans of treatment, and in taking nourishment, as intubation of the larynx does. The instruments for its performance are not expensive nor bulky, and can and should be carried in the hypodermic-case of every physician at any and all times, as well as the solvent solutions, so that he may be ready for an emergency at any time and at any place.

I hope that I may receive a frank opinion as to the advisability or non-advisability of my proposed method. Of course, it is evident that this plan is suitable for laryngeal treatment in all cases where local medication is required.

I remain, respectfully yours,

ERNST ZIMMERMANN, M.D.

BATESVILLE, IND.

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*A CRUCIAL TEST OF CUPRIC ARSENITE.*

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—For the satisfaction and encouragement of a large number of readers of the GAZETTE who favored me with communications in reply to my paper, which appeared in the July number, upon "Arsenite of Copper as a Remedial Agent," I beg leave here to submit for their consideration an instance of its use, which may be accepted as a crucial test. While I am not disposed to claim for this preparation unusual powers, it is not too much to assert that in the majority of cases such as I have indicated it will prove efficient. Like many other remedies, it has certain limitations, but when I have been able to collate the experience of others, who are now giving the matter attention, I may be able to outline more precisely the indications for its application.

The circumstances attending its use in this particular case are about as follows: One of my patients, who lately visited the country for a brief sojourn, was so fortunate as to have a supply of the tablets, each containing the one-hundredth grain of the drug, and, along with others in the house, suffered during the night from a severe attack of cholera morbus, brought on, doubtless, from indiscretions in

diet and changes in the weather. In the early morning it was found that no less than four of the family were suffering from the same complaint,—three adults, and one child 6 years of age,—but not until then did it occur to them that any remedy was at hand. After breakfast a consultation was held, the result being that three of the tablets were dissolved in water according to the directions I had given, and, although at the time of beginning treatment, the disease had shown no signs of abatement, yet, in the course of an hour, all of them expressed themselves as feeling greatly improved. At dinner-time there was a general consensus of opinion that they were well enough to undertake a pleasure-trip into the country, a distance of ten miles, as had been previously arranged. Fortunately, no difficulty was experienced on the route, and the jollification was such that they all freely indulged in ice-cream and cake before returning home, which, to say the least, was rather an unwise proceeding, considering the interruption of the functions of the alimentary tract. Without an exception, however, they returned in the evening free from any discomfort, in excellent spirits, and with good appetites for supper, which they took no precaution to stint, and, strange to say, none of them suffered any inconvenience whatever thereafter.

Such attacks, as above described, I have frequently witnessed during the past year, and, as a rule, they have been followed by equally happy terminations, and I bespeak for this new remedy a careful investigation on the part of my brethren in the field, believing they will find it an acceptable addition to our resources for the relief of affections which are often stubborn, and, when not nipped in the bud, are sometimes alarming.

In this connection I would like to mention that one of my patients is engaged in farming, and lately having a calf a few weeks old, which had become greatly emaciated from what is known as "scours," he decided, after many other remedies had failed, that he would try the arsenite of copper, giving the whole of one tablet at a single dose, by dissolving it in the milk when the animal was fed in the morning. Now, whether it was hypnotism, suggestion, mesmerism, metallo-therapy, transference, or what not, that calf had no "scours" from that time forward, and had no further treatment.

In conclusion, I may add that the matter of supplying samples became quite burdensome, so great was the demand, but I beg to say that I secured the kind offices of Messrs. Parke, Davis & Co., who have placed the tablets on their list, and will send samples to those who may wish to investigate further the clinical value of this remedy. Those who have already had an opportunity of observing its effects will confer a favor by advising me of the results at their convenience, with a view to securing the combined experience of different observers in various sections of the country.

JOHN AULDE, M.D.
4719 FRANKFORD AVENUE,
PHILADELPHIA.

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## *ARSENITE OF COPPER IN CHOLERA MORBUS.*

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—I wish to report the following cases treated with arsenite of copper:

CASE I.—T. H. Stewart (myself), 62 years old; bilious, nervous temperament; subject to cholera morbus once or twice a year. On the — day of August last, at 2 A.M., cholera morbus set in with great violence, and continued growing worse until 5 A.M., when I began to take arsenite of copper, as directed by Dr. John Aulde, of Philadelphia,—viz.: Dissolve a tablet containing one-hundredth of a grain in from four to six ounces of soft water, and take a teaspoonful every ten minutes for one hour, then every hour. I thought I was better one minute or so after the first dose. I knew I was better after the second dose, and when six doses had been taken, and one hour passed, all that swelling of stomach and bowels, and sickening, deathly pain, and agonizing tormina, and tenesmus at every stool, which were frequent, was gone. A very serene feeling came over me. I thought I would sleep till the first every-hour dose came; but lo! I slept uninterruptedly and most refreshingly for five hours. I awoke feeling quite well, except that I had no appetite, and resumed the treatment for the balance of that day.

CASE II.—Miss J. W. Stewart (my daughter), 22 years old; of nervous temperament; has occasional spells of indigestion. The last spell, which occurred in August, was marked by entire loss of appetite, sick stomach, and diarrhœa, with constant uneasiness in stomach and bowels. I requested her to note every sensation and change which might follow the first dose of the arsenite, and then

commenced giving it to her. She said she felt better after two or three doses were taken. The diarrhœa was arrested at once. The next meal she had a fair appetite. She continued the treatment for two days, and is now, after eight or ten days, quite well.

I ought to have said that very frequent eructations of a metallic taste occurred with myself during the first hour.

THOS. H. STEWART.

DIXIE, GA.

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### *THE POISONOUS PROPERTIES OF CHROMIC ACID AS A CAUTERY.*

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—A few days since I happened to get some of the back numbers of the THERAPEUTIC GAZETTE, and am not a little surprised to find in the July number, in the concluding lines of an article entitled "The Toxic Action of Chromic Acid as a Cauterant," and reported by Dr. J. William White (presumably Professor White), the following sentences: "The sudden death in this case, the author continued, was surprising, as the text-books contain no word of warning against the dangers of using chromic acid, while recommending its employment. Gubler, however, in the *Gazette Méd. de Paris*, 1871, had said that the absorption of chromic acid was not free from danger, and patients had been poisoned by a too extensive application to the surface of their bodies."

By the way, chromic acid and its allied salts are not only poisonous, but very poisonous.

It appears that chromic acid was used before by Professor White, apparently with nothing to indicate the need of caution. Perhaps Gubler's sentence is or was taken as conveying the idea that the external application of chromic acid is only poisonous, and not sometimes fatal.

It also seems that in this case no antidote was given, but simply an expectant treatment adopted, as the nature of the sudden sickness appears to have been a mystery.

True, some of the text-books contain no word of warning. Still, it may be interesting to review the toxicology of chromic acid in its outward application. This I have done with the literature at my command. As will be noticed, it contains most of the German works on materia medica and toxicology, fewer English and American authors. Nothing in regard to its toxicology is to be found in Schmiedeberg (*Grundriss der Arzneimittellehre*, 1883); Ewald (*Handbuch der allgem. und speciellen Arzneiverordnungslehre*, 1887, 10, Aufl.); V. Ziemssen (*Handbuch d. speciell. Pathologie und Therapie*, Band. xv., Intoxicationen, 1880): Hugo Schulz (*Grundriss der praktischen Arzneimittellehre*, 1888); Geissler and Möller (*Encyclopædie der gesammten Pharmacie*, 1886); Bartholow ("Treatise on Materia Medica," 6th and 7th edit., 1888, 1889); Röll (*Lehrbuch der Arzneimittellehre für Thierärzte*, 1880): Roth (*Die Arzneimittel der heutigen Medicin*, 5, Aufl., 1886); Stillé and Maisch ("Nation. Dispensat.," 4th edit., 1887); in Liebreich and Langgaard (*Compendium der Arzneiverordnung*, 1887); and Ringer ("Handbook of Therapeutics," 12th ed., 1889) nothing new, except that the latter says: Mr. John Marshall uses lead lotion immediately after. From Maschka (*Handbuch der gerichtlichen Medicin*, Bd. ii., 1882) we do not learn much, except that he mentions a case of poisoning, p. 112; Baer ("Vergiftung durch Cromsäure," in *Phila. Med. and Surg. Rep.*, xx. 19, p. 362, 1869); Bing (*Vorlesungen über Pharmakologie*, 1884, 1886) only mentions its physical properties. The U. S. Dispensatory also mentions Gubler's reports of the year 1871.

The following citations give the most information as to the effects of the external application of chromic acid:

Harnack-Buelheim (*Lehrbuch der Arzneimittellehre v. Arzneiverordnungslehre*, 1883), says of chromic acid, p. 115: "The general impression is that externally applied this substance causes less pain than other caustics, but yet its action may be extremely violent, and should, therefore, be carefully watched."

Böhm (*Lehrbuch der allgem. u. speciellen Arzneiverordnungslehre*, 1884), says on page 109: "The possibility of poisoning from absorption of chromic acid should be remembered. The application should be limited to small surfaces, and its effects should be carefully watched."

Nothnagel and Rossbach (*Handbuch der Arzneimittellehre*, 1884, 1887) say, on p. 346: "In addition, symptoms of general poisoning may likewise follow the external application of chromic acid in man,—a metallic taste in the mouth, peculiar odor, vomiting, diarrhœa, and profound collapse" (Mosetig and Bruck).

Bernatzik and Vogl (*Lehrbuch der Arzneimittellehre*, 1886) speak in a similar strain: "Even its external application should be watched with the greatest care, on account

of the danger of its ready absorption. Violent vomiting, diarrhœa, collapse, and even death, and violent choleraic symptoms have frequently been observed to follow the external use of chromic acid as a cautery" (A. Mayer, Bruck, Mosetig, and others).

Lewin (*Lehrbuch der Toxicologie*, 1885) says: "Absorption may also take place on the surface of wounds and over the surface of the skin."

Vogel (*Specielle Arzneimittellehre für Thierärzte*, 1886, p. 500) says: "Caution must always be observed against its great poisonness, even when diluted."

Kobert (*Comp. der prakt. Toxicologie*, 1887) says, p. 65: "Unfortunately, it is always absorbed, and so may produce general symptoms of intoxication, which especially affect the kidneys and large intestine."

Hager (*Handbuch der Pharmaceut. Praxis*, 1880) gives a full history of a case as follows: "Von Mosetig reports in the *Jahresber. d. K. K. Krankenhauses* a case of poisoning with chromic acid with fatal issue. The case was one of medullary carcinoma of the left breast, in a woman 39 years of age, which was cauterized with chromic acid, with the hope of arresting the rapid icherous discharge, which was then taking place. On the following night numerous symptoms of poisoning occurred (vomiting, abdominal pain, etc.). Death resulted on the following morning. Mosetig had already noted the occurrence of vomiting after the use of chromic acid as a cautery, but had attributed it to the employment of chloroform. The above case, however, seems clearly to show that the vomiting was the result of the application of the chromic acid. Chromic acid should, therefore, never be employed but with great caution."

This case very closely resembles the one related by Professor White. Finally, a case of poisoning, in which, however, recovery took place, is also to be found in the *Therapeutische Monatshefte* for August, 1888, p. 323.

Very respectfully yours,

WM. WEBER.

PITTSTON, PA., September 9, 1889.

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### *GELSEMIUM SEMPERVIRENS—OBSERVATION ON ITS USES.*

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—Noticing the inquiry of Dr. Wharton Sinkler, of Philadelphia, in the June number of the GAZETTE, I see that many members of the profession have given little attention to the therapy of this valuable agent; hence I have concluded to jot down for the consideration of the busy practitioner a few of my own observations of its merits and applications.

It may be true that one drachm of the fluid extract of gelsemium proved fatal in one case reported. It is, however, far less toxic than many other agents in general daily use; but still the toxic bugbear seems to continue to strangle its reputation.

Close observation and careful investigation are often necessary to distinguish the effects of disease from the effects of medicine. Medicine is often indicted when disease gave the blow. A remedy may be given and the patient recover, but it requires many duplications of the treatment to decide whether it was *post hoc* or *propter hoc*.

Years ago, in order to become more fully acquainted with the physiological effects of gelsemium, I commenced, in experimentation upon myself, with 5 drops t. i. d. of the fluid extract, increasing one drop every day until fifteen were taken t. i. d., feeling no effects until the evening of the day of the large doses, when a very peculiar sensation of the eyes supervened and drooping of the lids; the agent was then suspended.

In reply to Dr. Sinkler's query, I will say that I do not consider, nor is, a single dose of 15 or 20 drops for an adult dangerous to life.

When administering gelsemium we must keep in mind its tendency in large doses to paralyze the motor and sensory ganglia, and also that it produces death by paralysis of respiration.

Professor Roberts Bartholow says ("Materia Medica and Therapeutics") that "Opium, when given with gelsemium, increases its effects in the whole sphere of its physiological activity." Yet, notwithstanding the *ipse dixit* of this distinguished physician, I have found it to be an *antidote*, and give it to antagonize the toxic effects of opium. Here hangs an important question to be decided by experimentation of learned physiologists, Is gelsemium an antidote to opium?

In conclusion, three years ago I was called to see an Irish servant-girl, aged 20, in whose case hysteria so completely simulated acute peritonitis as to thoroughly deceive me for the space of several hours to relieve the pain, vociferously complained of. Morphine was freely administered hypodermically, but without effect; it utterly failed to relieve. Finally, becoming apprehensive of the toxic properties

of the drug, I made a digital vaginal examination, which at once revealed the true character of the girl's trouble. Now, here was a case presenting two indications to be met promptly. First, to prevent narcosis; second, to overcome the hysterical paroxysm. Fortunately, a single remedy could meet both indications,—an antidote to morphine and a remedy for hysteria. I accordingly administered 20 minims of the fluid extract of gelsemium hypodermically, followed promptly by relief, and the girl passed a comfortable night, and was equal to her household duties next day.

The intoxicating effects of a large hypodermic of morphine—so alarming to friends of patient—may readily be controlled by a proportional hypodermic of gelsemium, which I consider the best known antidote.

I reported my experience of its antidotal properties in the GAZETTE, June, 1887, page 429. Subsequent experience with the drug has not altered my opinion.

Strychnine hypodermically administered is one of the best adjuvants, and is a wonderful prompter of respiratory energy, and should be used in that capacity when gelsemium has nearly overcome the narcosis.

In treating a case of profound opium narcosis, the effects of gelsemium should be carefully watched, and, as the violent pulsations of the carotids grow less, and the swollen, blue, congested condition of the face subsides, the dose should be lessened, the intervals prolonged, and strychnine resorted to with great caution.

In ordinary cases, indicating the use of gelsemium, 3 to 5 drops may be given to women, 5 to 6 drops to men t. i. d. for an indefinite period. I speak only of the best preparations of the drug.

Gelsemium is an excellent adjuvant in gonorrhœa, and may be given in 5- to 6-drop doses t. i. d. for six to eight consecutive weeks. It is also a diaphoretic in 1-drop dose every half hour, until ten to twenty drops are taken, the patient being well wrapped up in bed. Great advantage may also be found from its use in hysteria, *especially* that form arising from ungratified sexual desire or venereal excesses. Gelsemium obtunds the sexual appetite and allays the irritability of the generative organs.

In acute congestions of the brain and great nerve-centres, caused by heat-stroke or opium hypodermically given, it is invaluable.

I will say nothing of its value in fevers, pneumonitis, pleurisy, neuralgias, and other affections, but refer to text-books.

W. D. HUTCHINGS, M.D.

MADISON, IND.

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### *LABOR COMPLICATED WITH SHORT UMBILICAL CORD.*

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—Having met with the following somewhat unique case of difficulty in a case of obstetrics, I thought, perhaps, a history of the same would be of interest to your many readers, and put them on their guard, if ever, perchance, their experience should coincide with mine.

On August 14, at 10 P.M., I was called to attend Mrs. R. M., aged 29 years, who had already borne eight children. My patient had been in labor some hours. Pains all dorsal and quite severe. Found vertex presenting (O. R. P.); os dilated to about the size of a dollar. It was much cicatrized, tense, and very sensitive. Membranes already ruptured. As the case was some ten miles in the country I had to "stay it out." After some four hours the pains became intensified, and, by means of gentle manipulation of the os, dilatation gradually became accomplished, and the child presented at the perineum. I told my patient her trouble would soon be over. The pains continued, yet no progress was made, and, after waiting half an hour, I found that suddenly the presentation had changed to a face presentation! The next pain having made no impression on the child, I anæsthetized my patient, and delivered her of a fine ten-pound girl. I soon discovered the cause of all the trouble. The cord was only eight inches long, and the placenta was attached to the uterus by as much as two-thirds of its entire surface! I experienced considerable trouble in separating the placenta, but succeeded in so doing by patiently scraping and tearing it away with my finger-nail. (I prefer this method to using a curette.) I then washed out the uterus with a solution of hydrarg. biniodid., and my patient is making a good recovery, without a single backset.

In a somewhat extensive obstetrical practice, I have met with abnormally short cords, but never one so short as this, nor with the additional trouble of attached placenta.

HOWARD LANKESTER, M.D.

FISHER, MINN., August 17, 1889.

### *THE INFLUENCE OF THE ENTRANCE OF AIR INTO THE VEINS.*

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—In the September number of your journal I published an article entitled "The Influence of the Entrance of Air into the Veins," in which I stated that very little work of an original character had been done in this country upon this subject.

My attention has just been called to a very able research instituted some years ago by Dr. Nicholas Senn, of Milwaukee, which I was unfortunate enough to overlook when writing my paper.

I write this letter to you fearing lest my oversight may be misunderstood, and for the purpose of acknowledging Dr. Senn's priority in this country.

Yours, very truly,
H. A. HARE.

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### *THE EFFECTS OF THE ENTRANCE OF AIR INTO THE VEINS.*

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—I have read with much interest Dr. Hare's communication to the last number of your journal,—the effect of the entrance of air, etc. The subject is one which has interested surgeons for years. Unfortunately, we cannot draw too close an analogy between man and the lower animals in this instance. It is to be hoped that further experimentation may afford us some consolation and relief from this so-called "surgical superstition," as it has been denominated by a leading medical journal.

It has been shown that, even among the lower animals, there exists a marked difference in their susceptibilities. So eminent an authority as Professor Billroth, in giving the results of his experiments, states, "If with a syringe you pump only a small quantity of air into the jugular vein of a rabbit, it soon dies; while you may sometimes pump several syringefuls of air into a dog without observing any effect." The writer has noted the same effect upon cats.

I must acknowledge such results as interesting, and of scientific value, as regards the physiological process in the lower animals, but I am not satisfied there is sufficient evidence from these experiments to justify the medical press, or any one, relegating this "old" belief to the class of superstitions.

Dr. Hare distinctly states that his observations were upon dogs. The experiments of Professor Billroth* compels us to hasten slowly in accepting any analogy to man.

Very truly yours,
JOSEPH LEIDY, JR.

PHILADELPHIA, October 5, 1889.

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### *THE USE OF ACETANILIDE IN REFLEX COUGH.*

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—Mrs. T., a multipara, had from the fourth month, in two pregnancies, a most distressing and incessant cough, ceasing only with the birth of the child, and then instantly, with no return. When she requested a recipe for her cough, it was prepared, with the remark, "I know it will do me no good. I have used a number of prescriptions, and everything my neighbors can suggest." I run the gamut of cough mixtures, up and down again, with no effect whatever. At the end of a two weeks' siege she said, "That's just the way it was before." And then it was I learned the true history of the case. Put her on small doses of acetanilide, and in forty-eight hours she was comfortable, and, after a week, a 3-gr. powder a day was sufficient to completely control the cough, and now, after six weeks' use of the powders, is scarcely troubled in the least. About the only thing she notices is a slight disposition to clear the throat, which, upon inspection, appears normal.

W. M. SCHULTZ, M.D.

BUTTE, MONTANA.

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### *THE USE OF QUININE IN ORDINARY SUMMER COMPLAINT OR CHOLERA MORBUS OF ADULTS.*

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—The almost specific action of quinine in the above trouble, especially in allaying the vomiting, is worthy of mention, my attention being first called to it under peculiar circumstances.

A young lady, aged 20, suffered severely for two days. Deriving no benefit from "home" remedies, I was called. Finding her stomach so irritable as not to retain the medicine prescribed, after three or four attempts, I gave her, for the want of something to give, and having a more urgent call else-

* Billroth, "Surgical Pathology and Lectures," p. 31, vol. i., 1877.

where, four or five powders of quinine, 3 grs. each, which I happened to have with me, directing her to take one every two hours on the tongue until my return. On the next visit, a short time after, my surprise was great to hear the patient state that "they were good powders you left me, for I felt a great deal better after taking the first one." I continued the quinine for another day, combined with an astringent pill, in which time the patient fully recovered. Since then, in every similar case, I have used the same remedy, and never had it fail me.

In writing of this peculiar action of quinine, as experienced by me, I have no explanation to offer, save the hypothesis that the vomiting may be due to micro-organisms, and the quinine acting as a germicide.

W. MOREHOUSE GALLIGER, M.D.

SCRANTON, PA.

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*INCUBATION OF MEASLES.*

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—In the last number (October) of the GAZETTE I noticed an article on the "Incubation Period of Measles," which brings to my mind my own experience with this disease.

During the winter of '86–'87 we had an epidemic of measles in this county. After the epidemic had subsided I was called fifty miles into an adjoining county to see a severe case of measles. The people lived in a dug-out, and I was obliged to remain all night. I saw this case the first week in March, 1887. I did not see any more cases after this, and I am positive that I did not come in contact with any cases after the above visit.

In just *thirty* days after seeing this case I developed the measles, and the first rash appeared on my forehead. I was very sick for several days before and after the appearance of the rash. I have never fully regained my former state of health.

Yours truly,

L. R. MARKLEY, M.D.

KIMBALL, NEB., October 20, 1889.

## Notes and Queries.

*PEAT-MOSS AS A DRESSING MATERIAL.*

In the *Voĕnno-Meditzinsky Jürnal*, June, 1888, p. 75, DR. N. N. JAKIMOVITCH, of St. Petersburg, publishes an interesting paper on moss as a material for surgical dressing (*London Medical Recorder*, June 20, 1889). The high absorbent powers of various mosses, especially of the peat-moss (*sphagnum*), have been utilized by inhabitants of northern regions from time immemorial. Thus, according to Drs. A. F. Middendorf and A. E. Nordenskiold, the Samoiĕds and Tchuktchis employ moss for preparing lamp-wicks and as a bedding material for infants. [Similarly, Dr. E. J. Pokrovsky, of Moscow, in his invaluable medico-anthropological monograph on the "Physical Development of Children" (1884), p. 188, says that a soft and dry moss is employed as bedding for infants' cradles by Laplanders, Lithuanians, Tcheremisses, and Samoiĕds. The latter, however, use the material for the purpose only in summer time, while in winter they prefer to place their infants on a thick layer of a coarsely-powdered, soft and dry rotten birch-wood. The moss litter is changed several times a day. By its use the infant's bed is kept in a very clean and generally healthy state.—*Rep.*] As a material for surgical dressings moss was introduced first by Professor Leisrink in 1882, whose recommendation was soon followed by similarly favorable communications emanating from Drs. Hagedorn, Milk, Korach, Neshel (*vide* the *London Medical Recorder*, 1885, p. 336), H. A. Lediard (see the *British Medical Journal*, October 18, 1887, p. 829), etc., and referring mainly to the peat-moss. The latter grows abundantly over marshy and low districts of the northern regions of Europe, Asia, and America. In Germany nine species of the *sphagnum* only are found (as Hagedorn states), while in North Russia the natural family Sphagnaceæ has fourteen representatives (*vide* Dr. Ivanitzky's paper in the *British Medical Journal*, 1887, vol. ii. p. 492). As is known, the peat-moss constitutes the most essential ingredient of the peat or turf which has been similarly recommended as a surgical dressing by Professors Esmarch, Neuber, and Trendelenburg. The so-called "vegetable felt," which is largely used (especially in a powdered form) all over West Russia for disinfecting middens, privies, etc., is nothing more than a compressed peat-moss. The Russian literature contains a whole series of papers, dealing with peat-moss as a material serving for the latter purpose (Leshtchinsky, Necki, Milzer, Uspensky, Bekarevitch, etc.), but the researches concerning the substance as a dressing material are yet but scanty. Meanwhile, the matter presents a great practical interest, since the moss-dressing, being cheap, is employed

in many hospitals and in country practice, and there is every probability that it will be used on a gigantic scale at the very first opportunity under the form of some wholesale international thrashing, commonly named "war." At all events, considerable piles of the material are stored in various nooks and corners, and many specimens of problematical value are in the market. One of the specimens has been recently handed over for examination to Dr. Jakimovitch by Dr. N. A. Vilchkovsky, the senior surgeon of the St. Petersburg Nikolaëvsky Military Hospital, who received it from the Russian Red Cross Society. Macroscopically, the specimen proved to represent a fairly dense but exceedingly light and expansive mass, of a light-brown color, with coffee-brown spots, consisting of minute twigs and fibres of the *Sphagnum subsecundum*, *S. nemoreum*, and *S. Girgensohnii*, with a copious admixture of broken branches, roots, and leaves of some foreign plants (shrubs and herbs). The general conclusions drawn by the writer from his experiments are as follows: 1. Moss as a dressing material cannot be regarded either as an aseptic or antiseptic. 2. Being extremely friable, it easily breaks into powder. Hence it is apt to fall out of pads, to soil linen, and to give rise to displacements of the whole dressing applied. 3. Being excessively voluminous and light, it is inconvenient in regard to transportation, especially in war time. 4. Its absorptive power, however, is very considerable. 5. To become fit for use in the capacity of an aseptic and antiseptic dressing, it must be previously subjected to a special treatment. [In his communication on peat-moss in the shape of "vegetable felt," Dr. A. J. Leshtchinsky alleges (*Transactions of the General Meeting of the Russian Railway Medical Men*, 1886, p. 57) that the material possesses powerful disinfecting or parasiticide properties. However, Dr. D. M. Uspensky, of Professor A. P. Dobroslavin's laboratory, has proved (*Vratch*, Nos. 32 and 33, 1887, p. 613),—1, that the "vegetable felt" contains as many as seventy thousand living germs in each one gramme (of powder); 2, that, besides mould fungi, there are constantly present bacteria and micrococci of various species, some of which liquefy jelly and some do not; 3, that the substance does not destroy the microbes of typhoid fever, cholera, and anthrax, and even decidedly promotes their growth; 4, that, therefore, the "vegetable felt" does not represent anything like an "antiseptic" material.—*Rep.*]



### *BEET-ROOT IN HABITUAL CONSTIPATION AND HEMORRHOIDS.*

In the St. Petersburg new periodical (*Meditsīna*, No. 6, 1889, p. 10) Dr. S. K. Kazatchkoff draws attention to the fact that a strong infusion or decoction of the common beet-root (*Beta vulgaris;* Russ., *burakī* or *sviokla*) represents an excellent mild aperient, very much in favor with the South Russian peasantry, who resort to it especially in cases of atonic habitual constipations and hemorrhoids. It is taken in doses from ½ to 1 tumblerful at bedtime, or early in the morning, about an hour before breakfast. The remedy does not cause any abdominal pain, griping, or rumbling, nor does it create any tendency to consecutive constipation. On the contrary, any disposition in that direction is decidedly removed by a daily use of the decoction for a certain period. It is stated, however, that the patient's bowels get habituated to the beet-root in a week, so that, by the end of that time, the dose of the decoction should be increased, or a couple of apples a day be added. According to the author's experience, many constipated patients prefer the beet-root "juice" to castor oil, rhubarb, podophyllin, magnesia, milk-sugar, milk, mineral waters, and similar ordinary means, used by them previously to their making acquaintance with the simple remedy under consideration.—*London Medical Recorder*, June 20, 1889.

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### *A NEW LAW—EVERY CASE OF TYPHOID FEVER SHOULD BE REPORTED TO THE HEALTH OFFICER.*

Typhoid fever is a disease which the State Board of Health has declared to be "dangerous to the public health," and as such it comes under the law requiring physicians to report to the health officials. Any physician who shall neglect to immediately give such notice "shall forfeit for each such offence a sum not less than fifty, nor more than one hundred, dollars." *After October 1, any householder* who shall refuse or wilfully neglect to give such notice shall be deemed guilty of a misdemeanor, and is liable to a fine of one hundred dollars, or, in default of payment thereof, may be punished by imprisonment in the county jail not exceeding ninety days.

It seems important that the people generally shall understand this new law, which applies to scarlet fever, diphtheria, small-pox, and all such dangerous diseases, as well as to typhoid fever; but at this time of the year

typhoid fever is usually most prevalent, and it is especially dangerous in times of drought. Therefore the safety of the people may now be greatly promoted by having every case of typhoid fever reported to the health officer, who is by law (Section 1, Act 137, Laws of 1883) required to promptly attend to the restriction of every such disease. A new law, which takes effect October 1, makes it a misdemeanor, punishable by fine or imprisonment, for the health officer knowingly to violate that section of the law, or for any person knowingly to violate the orders of the health officer made in accordance with that section. But the actual penalties which are incurred by the violation of these laws are the *death penalties* to many of our people, about one thousand being lost in this State in each year from typhoid fever. The saving of a large proportion of these lives is the real reason for the effort, in which, it is hoped, all our people will join, for the restriction of typhoid fever and other dangerous diseases.

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### *A PRECAUTION TO BE TAKEN AFTER GIVING AN INJECTION OF MORPHINE.*

M. HUCHARD, in his fortnightly notes on therapeutics, points out how necessary it is, after giving a hypodermic injection of morphine, to maintain perfect silence in the room where the patient is lying. Morphine, far from suppressing sensitiveness, like chloroform, rather tends to exalt the excitability, and particularly the liability to disturbance from slight noises. This peculiar exaltation of excitability is most marked in the frog, but may also be noted in other animals and in man, though the fact does not appear to have received proper attention hitherto. The failure of morphine injections to procure sleep is, in the majority of instances, due to neglect of this simple precaution.—*London Medical Recorder*, June 20, 1889.

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### *A CASE OF POISONING FROM PELLETIERINE.*

In the *University Medical Magazine* for August, 1889, DR. E. B. LANDIS, reports a case of poisoning from pelletierine, which, in its general symptoms, closely agrees with a case of poisoning from male fern and the extract of pomegranate, reported by Dr. Bayer in the *Prager Medicinische Wochenschrift.*

Dr. Landis's case is as follows:

C. R., a male, æt. 26, having at various times passed fragments of tænia, applied to the hospital for relief. In the evening an enema was given to empty the lower bowel. The next morning at five o'clock a bottle of Tanret's pelletierine, containing ½ ounce, was given in a glass of sweetened water. Ten minutes after its administration there was marked disturbance of vision, with dilatation of the pupils. This gradually grew worse, until there was inability to distinguish one object from another, everything appearing in a confused mass. With the disturbance of vision there was violent headache, dizziness, and gastric uneasiness, which gradually grew worse, and which finally led to violent retching and vomiting. The patient was unable to sit up, partially on account of the dizziness, but chiefly because of the general prostration. The pulse was rapid and feeble, and the temperature rose to 101.5°. The respirations were also rapid and shallow. A cold sweat broke out, which was limited to the head and face. Drowsiness came on, and continued for five hours.

One hour after the administration of the drug a purge was given, which emptied the bowels about 9 A.M., bringing away numerous pieces of tænia, and which was accompanied with retching and vomiting. After this the symptoms gradually diminished, but it was not until about thirty-six hours after the drug was given that the disturbed vision, dizziness, and nausea had entirely disappeared.

One very marked feature of the case was the diminution in the quantity of urine excreted. During the twenty-four hours not more than twelve ounces were passed, the color of which was dark and the odor very offensive. The prostration of the patient was extreme, and diarrhœa continued for several days.

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### *PHENACETIN IN PERTUSSIS.*

DR. GEO. C. IRWIN, of Sabetha, Kan., reports a case of uncomplicated pertussis, with severe laryngeal spasms of hourly occurrence, in an infant aged 3 months, for which, after using atropine, antipyrin, quinine, and other remedies so often recommended for this disease, he gave phenacetin in ½-grain doses in 10 drops of pure glycerin, which is a moderately good solvent, and was surprised to find that it immediately gave relief, so that the first night after using it every four hours the

child obtained six and one-half hours' good rest, and there has been a steady and gradual improvement since.—*Archives of Pediatrics*, August, 1889.

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*CARISSA XYLOPICRON.*

The wood of this plant is used, like the quassia-wood, for making cups, which, when filled with water, give up a certain part of their bitter principle, and may be used in fevers or where a tonic is required; it is even said to possess vermifuge properties. In Mauritius the drug is employed considerably for this purpose. DUQUESNE claims that he has obtained remarkable success with the use of an alcoholic extract of the root of this drug. He administers it in doses of from 5 to 7 grains as a substitute for quinine for intermittent fever.—*Der Fortschritt*, July 20, 1889.

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*THE PROPHYLAXIS OF TUBERCULOSIS.*

The standing committee of the Congress for the Study of Tuberculosis, consisting of MM. Chauveau (President), Butel, Cornil, Grancher, Landouzy, Lannelongue, Legroux, Leblanc, Nocard, Rossignol, Verneuil, Villemin, L. H. Petit (Sec. Gen.), have issued the following "Instructions to the Public, to Enable it to Know and be Capable of Protecting Itself against Tuberculosis" (*Lancet*, August 10, 1889). The document was communicated to the Academy of Medicine on July 30. When it came on for discussion at the meeting of the Academy, on August 6, the document was submitted to severe criticism, especially by Drs. G. Sée and Dujardin-Beaumetz, the latter declaring there was no evidence that tuberculosis was propagated through meat. Other speakers also criticised the recommendations in Clause 6, and eventually the debate was adjourned to the 13th inst.

I. Tuberculosis claims more victims in towns, and even in rural districts, than any other disease. Thus, in 1884, for example, of fifty-six thousand nine hundred and seventy deaths in Paris, about fifteen thousand, or more than one-fourth, were due to tuberculosis. The tuberculous are so numerous because pulmonary phthisis is not the sole manifestation of tuberculosis, as has been erroneously believed by the public. Physicians have good ground for considering as tuberculous many other diseases besides pulmonary phthisis. In fact, a number of cases of bronchitis, catarrhs, pleurisies, croup (gourmes), scrofula, meningitis, peritonitis, enteritis, white swellings (osseous and articular), and cold abscesses are tuberculous diseases as formidable as pulmonary phthisis.

II. Tuberculosis is a parasitic disease, virulent, contagious, transmissible, caused by a microbe,—the bacillus of Koch. This microbe penetrates into the organism by the digestive canal with food, by the air-passages with inspired air, by the skin and mucous membranes following sores, punctures, wounds, and various kinds of ulceration. Certain diseases—measles, small-pox, chronic bronchitis, pneumonia; certain constitutional states due to diabetes, alcoholism, syphilis, etc.—greatly predispose the individual to contract tuberculosis. The cause of tuberculosis being known, the precautions taken against its germs are capable of preventing its propagation. We have an encouraging example in the results obtained in respect to typhoid fever, the epidemics of which diminish in all towns where steps have been taken to prevent the typhoid germ mingling with drinking water.

III. The parasite of tuberculosis may be met with in the milk, muscles, and blood of animals serving for the food of man (ox, cow especially, rabbit, poultry). Raw or underdone meat and blood, being capable of containing the living germ of tuberculosis, should be prohibited. Milk, for the same reason, should only be consumed after being boiled.

IV. Owing to the dangers arising from milk, the protection of young children, who are so readily attacked by tuberculosis in all forms (since there die annually in Paris more than two thousand tuberculous children below the age of two years), should especially engage the attention of mothers and nurses. The ideal is, of course, lactation by the healthy woman. A tuberculous mother should not nourish her child. She should intrust it to the care of a healthy nurse living in the country, where, under the best hygienic conditions, the risks of tuberculous contagion are much less than in the towns. The child thus brought up will have a great chance of escaping tuberculosis. If suckling at the breast be impossible, and it has to be replaced by feeding on cow's milk, this milk, given to the infant by the bottle or spoon, should always be boiled. The unboiled milk of asses and goats is far less dangerous.

V. Owing to the dangers arising from butchers' meat, which may preserve all the characters of health even when the animals

are tuberculous, the public is largely interested in being assured that the inspection of meat, required by law, is properly and generally practised. The only absolutely certain means of avoiding the dangers of meat coming from tuberculous animals is to cook it to such an extent that the deep parts are as well done as the surface; only thoroughly roasted, boiled, or fried meat is devoid of danger.

VI. On the other hand, the germ of tuberculosis, being capable of transmission from the tuberculous to the healthy subject by sputa, pus, dried mucous discharges, and all objects laden with tuberculous dust, it ought, to insure security from the transmission of tuberculosis, to—1. Be known that the sputa of the phthisical being the most formidable agents for the transmission of tuberculosis, there is a public danger in distributing them on the soil, carpet, hangings, curtains, napkins, handkerchiefs, cloths, and coverings. 2. Be well understood, in consequence, that the use of spittoons should be imposed everywhere and upon everybody. These should always be emptied into the fire and cleansed with boiling water; they ought never to be emptied on dust-heaps, or in gardens, where they may tuberculize the poultry, nor into the latrines. 3. Not to sleep in the bed of a tuberculous subject: to dwell in his room as little as possible, and especially not to suffer young children to sleep there. 4. To remove from places, inhabited by the phthisical, individuals regarded as predisposed to contract tuberculosis, subjects born of tuberculous parents, or having had measles, small-pox, pneumonia, repeated attacks of bronchitis, or suffering from diabetes, etc. 5. Not to use objects which may have been contaminated by the phthisical (linen, bedding, clothing, objects of toilet, hangings, furniture, toys) except after previous disinfection (high pressure steam, boiling, sulphur vapor, lime-washing). 6. To insure that the rooms of hotels, lodging-houses, châlets, or villas occupied by the phthisical in watering-places or winter resorts are furnished and carpeted in such a way that disinfection may be readily and completely effected after the departure of each patient; the best plan would be that these rooms should have neither curtains, carpets, nor hangings; that they should be painted with lime, and the floor be covered with linoleum.

The public is mainly interested in preferring hotels in which such indispensable hygienic precautions and measures of disinfection are carried out.

In this connection we make mention that the second Congress for the Study of Tuberculosis will be held at the end of the month of July, 1890, under the presidency of Professor Villemin, when the following questions will be submitted for discussion: 1. The identity of tuberculosis in man and that of the bovines, gallinæ, and other animals. 2. The bacterian and morbid associations of tuberculosis. 3. The hospitalization of tuberculous subjects. 4. Agents capable of destroying the bacillus of Koch, non-injurious to the organism, as regards the prophylaxy and the therapeutics of human and animal tuberculosis. Intimation of intention to be present and subscriptions (twenty francs) should be forwarded to M. G. Masson, Treasurer, 120 Boulevard Saint Germain, and that communications which concern papers should be addressed to Dr. L. H. Petit, General Secretary, 11 Rue Monge, Paris.

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### *A NEW TREATMENT AND POSSIBLE CURE FOR CANCER.*

The anonymous correspondent of the *Lancet*, whose suggestion of the combined use of papain and thallin in cancer was noticed in the last number of the *London Medical Recorder*, turns out to be Dr. J. Mortimer Granville. He has since supplemented his first statement by a further communication, in which he says that if the solvent or digestive power of the papain is to be brought to bear on the morbid growth, it must not be exhausted by being first mixed with food. He, therefore, recommends *very frequent* administration of the papain and thallin and their combination in the form of pills. The aim is to get absorption of the drug, not local action on the stomach. In cancer of that organ, Dr. Mortimer Granville gives, besides the pills, papain suspended in water with thallin and an alkali. With the view of further preventing exhaustion of the papain, he directs that the patient shall be fed as exclusively as possible on a vegetable diet, and that the pills shall be taken before meals or in the interval between them. He has not found that the thallin given as described exerts any injuriously depressing effect on the organism as a whole. The vitality of the morbid growth *seems* (the italics are Dr. Mortimer Granville's) to be depressed by saturation with the thallin and papain locally; this is effected by applying a strong paste of the two drugs in combi-

nation, or, where practicable, by their inunction. The results obtained so far are said to be encouraging, and "make it clear that the method will deserve a full and fair trial by the profession."—*London Medical Recorder*, August 20, 1889.

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### *PICHI.*

The Chilian drug "pichi" (*Fabiana imbricata*) has been the subject of chemical investigation by different persons, but with somewhat discordant results. According to Dr. Rodriguez, who first called attention to it as a remedy in disorders of the liver and urinary organs (*Pharm. Journ.* (3), xvi. 542), the leaves and twigs yielded a crystalline, fluorescent substance, resembling æsculin, together with paviin and fraxin, two other constituents of horse-chestnut bark, a resin, and an essential oil. In addition, Dr. Lyons subsequently reported the presence of a bitter alkaloid, that he named "fabianine," yielding crystalline salts, and a crystalline neutral body, rich in carbon (*Pharm. Journ.* (3), xvi. 722). Then the drug was examined by Messrs. Nivière and Liotard, who failed to find any traces of an alkaloid or of the neutral crystalline compound, and attributed any therapeutic action it might exercise to the crystalline, fluorescent, glucoside principle (*Pharm. Journ.* (3), xviii. 460). More recently (*Amer. Journ. Pharm.*, August, p. 405) it has been examined by Messrs. Trimble and Schroeter, using the wood and bark, and they also have failed to detect an alkaloid, but confirm the presence of a fluorescent glucosidal principle, as well as of a crystalline neutral resin soluble in ether, strong alcohol, and chloroform, and insoluble in water, which they represent as of no medicinal value, and as having a composition agreeing with the formula ($C_{18}H_{32}O_8$).—*Pharmaceutical Journal and Transactions*, August 31, 1889.

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### *CHROMIC ACID FOR SWEATING OF THE FEET.*

During the year 1888 more than eighteen thousand Prussian soldiers were treated with a solution of chromic acid for sweating of the feet. A five per cent. solution was applied by means of a brush. The application was made after the feet had been washed and thoroughly dried, and the feet were left uncovered until the acid completely combined with the skin. The effect of the treatment was that the skin became drier, harder, and less tender. The wet, red skin became dry and smooth, and the unpleasant odor of the decomposing sweat disappeared. Many cases were cured or much improved by one application, and most of them by two or three. Where a second application had to be made, it was made after an interval of a week to a fortnight, when the hardened epidermis had peeled off. The effect of the second painting lasted longer than the first. A very gratifying result to the military authorities was the great improvement in the marching of the soldiers who had undergone the treatment.

A ten per cent. solution did not give better results than the five per cent. It appears that forty-two per cent. were healed, fifty per cent. improved, and only eight per cent. unrelieved. In seventy-five per cent. of the cases only, and generally after the use of more concentrated solutions than five per cent., were vesication, eczema, and wounds of the skin caused by the paint. The following conclusions were drawn respecting the treatment: 1. Chromic acid is the quickest and best remedy, or, at any rate, it is as good as salicylic acid preparations for sweaty feet. 2. The remedy is easily applied; it is cheap and clean. 3. It does no harm when the acid is pure and a solution of the right strength used. The irritability of the skin may be first tested by weaker solutions before the ordinary solution is used. 4. The application should be made by the doctor himself. 5. Wounds and ulcers on the feet must first be healed before the chromic acid is applied. 6. The best time to paint the feet, which have been washed and thoroughly dried, is about bedtime. As already stated, the second application is made a week or a fortnight after the first.—*Medical Chronicle*, September, 1889.

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### *DIAGNOSIS OF CEREBRO-SPINAL MENINGITIS BY PUNCTURE OF THE LIVER.*

Dr. C. Bozzolo reports in *La Riforma Medica* an interesting case of cerebro-spinal meningitis, in which the diagnosis was assisted by bacteriological observations made on the fluid obtained by puncturing the liver. A man, aged 54, who had been ill for five days previously, was admitted into the clinic at Turin suffering from feverishness, pain in the right side of the neck, jaundice, enlargement of the spleen, painful enlargement of the liver, bronchitis, and albuminuria. A rigor occurred more than once. Except the

pain in the neck and vomiting, no symptom whatever of meningitis existed. Six days after admission the patient died, having been slightly delirious for the previous forty-eight hours. Diagnosis being difficult, the author had on the fourth day after admission made an exploratory puncture of the liver, which was still painful. The blood extracted showed by cultivation and after experiments on animals the existence in it of Fraenkel's diplococcus of pneumonia. This result, in the absence of pneumonic and pleuritic symptoms, with the existing pains in the neck and vomiting, encouraged Bozzolo to diagnose meningitis,—a diagnosis which was confirmed by the post-mortem examination. In addition to the morbid changes in the meninges, gall-stones and acute endocarditis were found.—*Lancet*, September 21, 1889.

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*IODOFORM IN MALIGNANT PUSTULE.*

Dr. E. Rinonapoli (*Bolletino della R. Accad. Med.-Ch. di Napoli*, No. 3, 1889) gives particulars of several cases of malignant pustule treated by the subcutaneous injection of a solution of iodoform in ether. Dr. Rinonapoli began this method in 1886, some thirteen months before Senger's work on the antiparasitic action of iodoform appeared. The method employed is that of several injections into and around the seat of the pustule of a ten per cent. solution of iodoform in ether. The pain attending the injections is of severe burning character, but soon passes off. The beneficial effects are rapid in their appearance. In three or four hours after the injections, even in advanced cases, the fever lessens, the swelling round the pustule disappears, the tongue becomes clean, and the patient is able to sleep and to take food. The treatment appears to be of distinctly specific character, and to arrest at once the growth and multiplication of the charbon bacillus. If applied at the outset of the attack, the effect is said to be almost magical.—*Lancet*, September 21, 1889.

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*PATHOLOGY OF SEVERE BURNS.*

Dr. Oscar Silbermann, of Breslau, studying the clinical and pathological signs of the destruction of numerous red blood-corpuscles, found by his experiments: 1. That after extensive burns of the skin the red blood-corpuscles alter their form and lose their power of resistance to heat, drying, compression, and staining. 2. In consequence of these alterations, numerous thromboses in the arterioles and capillaries, especially in the finer branches of the pulmonary artery, occur, leading to stasis in different organs,—*e.g.*, lungs, kidneys, stomach, bowels, liver, spleen, skin, and brain. 3. The large deviation of the pulmonary capillary circulation produces a considerable impediment to the emptying of the right heart and serious venous congestion, as well as dangerous arterial anæmia. 4. This state, coupled with the above-mentioned symptoms, leads to bleeding and parenchymatous alterations in the affected organs. 5. The interference with the circulation also produces dyspnœa, a small pulse, angina, eclampsia, and anuria, as well as a remarkably low temperature.—*Lancet*, September 28, 1889.

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*MERCURIAL INUNCTIONS IN GLANDERS.*

Dr. Gold publishes in the *Meditsinskoĕ Obozrênie* a detailed account of a case of glanders which was successfully treated by a prolonged course of mercurial inunctions. The patient was a young peasant, and though he was unable to trace his illness to any contact with glandered horses, experimental observations on guinea-pigs proved quite clearly that he was suffering from glanders. Half a drachm of mercurial ointment was rubbed into the skin twice a day, and the condition of his mouth properly attended to. He was also kept on highly nourishing diet. The tumors on different parts of the body were opened, and in some cases the edges of the wounds pared or touched with the actual cautery, antiseptic dressings being employed throughout. No less than sixty-eight frictions were employed, and the patient was kept five months in hospital before being discharged cured. The good effects of the treatment began to show themselves after twenty inunctions, the tumors becoming softer and the fine crepitation in the lungs disappearing. Dr. Gold points out that no reliance should be placed on the denial of patients of having had to do with diseased horses, the only sure guides to a correct diagnosis being bacteriological observations and the experimental infection of animals with the purulent matter from the tumors. Again, he thinks this case shows that even very severe cases of glanders may sometimes be treated successfully by a persevering employment of mercury, either by inunctions or hypodermically.—*Lancet*, September 28, 1889.

*TRICUSPID STENOSIS.*

From some facts collected by M. LEUDET (of Rouen) and his father, the late PROFESSOR LEUDET, the comparatively rare condition of stenosis of the tricuspid orifice (*L'Union Médicale*, No. 96) may be either congenital or acquired. The former arises either in fatal endocarditis or from a malformation producing an excessive amount of muscular tissue at the auriculo-ventricular junction. In consequence of the stenosis, there may also be patency of the foramen ovale and incomplete formation of the ventricular septum; sometimes it is associated with pulmonary stenosis or lesions on the left side. Cyanosis is the most frequent symptom; and a systolic bruit, rarely a diastolic, may be produced; while the enlargement of the right auricle may occasionally be detected by percussion dulness crossing the sternum. It is obvious that the diagnosis of the condition is hardly to be determined, from other forms of congenital malformation. M. Leudet has collected details of one hundred and fourteen cases of acquired tricuspid stenosis,—eighty-six females and twenty-two males (in six the sex not stated); and in fifty-seven no antecedent disease, such as rheumatism, chorea, typhoid fever, or scarlatina, was noted. The degree of stenosis may be considerable, and it may be produced by—1, cohesion of the valves; (2) true stenosis of the orifice; (3) obstruction by vegetations, etc. The first often is the most frequent,—"a chronic, slow, silent endocarditis, generalized rather than deep, vegetating but little, yet adhesive and plastic, tending to cause the damaged valves to unite at their margins." In only eleven cases out of the one hundred and fourteen was the tricuspid stenosis solitary; usually there is concomitant mitral stenosis, which is always more marked than the tricuspid. Presystolic thrill and bruit at the xiphoid and above may be present, but do not from these observations appear to be common.—*Lancet*, September 21, 1889.

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*A CASE OF POISONING BY HYOSCYAMUS.*

In the *British Medical Journal* for September 21, 1889, MR. ARTHUR H. DODD reports a case of a woman, about 50 years old, who had been in the habit of occasionally taking tincture of hyoscyamus for gastrodynia. On September 30, Mr. Dodd was called to see her, she having swallowed by mistake, about five minutes previously, six drachms of tincture of hyoscyamus, B. P. In the mean time she had taken some mustard and water. Mr. Dodd found her much excited; pulse rapid, 130, regular; pupils equal, and reacting to light and accommodation. Free emesis was immediately produced by zinci sulph. and vinum ipecac, followed by copious draughts of warm water. In from twenty to twenty-five minutes after taking the poison the pupils began to dilate; pulse 120; and there was now great weakness and trembling of limbs, marked dryness of throat, and flushing of face. She walked with assistance to the bed, though with difficulty, and her extremities were cold. In a short time her pupils were fully dilated, and no longer reacting to accommodation or light; no headache. At 4.30 P.M., although sensible and answering questions rationally, she had difficulty in speaking, and seemed confused, but not giddy. At 5.30 P.M. she tried to rise from the bed, but found herself powerless to move her legs, both upper extremities were also almost completely paralyzed, and her power of grasping was feeble. She was now slightly delirious, wandering in thought and manner. At 8.30 P.M. pupils still dilated; pulse 84, irregular; she was still delirious, but if spoken to sharply answered questions rationally. Later on she was reported to be progressing favorably. On visiting the patient the following morning she was much better, having slept three hours. Vomiting had occurred during the night, which she attributed to pain in the stomach, probably due to the mustard. The bowels had been well relieved by an aperient administered the previous night; tongue clean; pupils smaller, but still rather dilated; pulse regular, 84; dryness of throat had disappeared; she could walk, though there still remained great weakness of limbs; was now able to grasp firmly, and her speech was once more normal. The following day she had recovered completely.

The respiration was unaffected throughout. A slight deafness with which she was troubled was much aggravated while under the influence of the drug.

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*MAXIMAL DOSES OF NEW REMEDIES.*

The following table, which contains also some remedies that have been used in the United States for a number of years, is reprinted from *Merck's Bulletin* for June, 1889, and is stated to have been compiled principally from B. Fischer's *Neuere Arzneimittel* (Berlin, 1889) and from Professor Anrep's and Dr. Voromikin's *Russian Medicinal Agenda*, 1889, I.

| Medicament. | Maximal adult dose, by mouth. | | | |
|---|---|---|---|---|
| | Single. | | Daily. | |
| | Grammes. | = about grains. | Grammes. | = about grains. |
| Acid, Cubebic | 1 | 15 | 5 | 75 |
| " Hydrobromic, diluted (ten per cent.) | 40 drops. | | 100 drops. | |
| " Iodic | 0.3 | 4½ | 1.2 | 18 |
| " Perosmic | 0.015 | ¼ | 0.05 | ¾ |
| " Sclerotic | 0.06 | 1 | 0.25 | 4 |
| " Valerianic | 10 drops. | | 40 drops. | |
| Adonidin | 0.006 | 1/10 | 0.03 | ½ |
| Agaricin | 0.015 | ¼ | 0.05 | ¾ |
| Allyl tribromide | 8 drops. | | ..... | ..... |
| Aloin | 0.3 | 4½ | 0.6 | 9 |
| Amylene hydrate | 4 | 60 | 8 | 120 |
| Anemonin | 0.03 | ½ | 0.1 | 1½ |
| Antifebrin | 1 | 15 | 3 | 45 |
| Apiol, crystallized (solid parsley-camphor) | 1 | 15 | 4 | 60 |
| Apocodeine | 0.03 | ½ | 0.8 | 1½ |
| Apomorphine hydrochlorate | 0.01 | 1/6 | 0.5 | ¾ |
| Arbutin | 1 | 15 | 4 | 60 |
| Arsenic bromide | 0.01 | 1/6 | ..... | ..... |
| " iodide | 0.01 | 1/6 | ..... | ..... |
| Asparagin | 0.1 | 1½ | 0.3 | 4½ |
| Aspidospermine hydrochlorate | 0.003 | 1/20 | 0.006 | 1/10 |
| Baptisin | 0.03 | ½ | 0.1 | 1½ |
| Bebeerine sulphate | 3 | 45 | 10 | 150 |
| Benzene (benzol) | 1 | 15 | 6 | 90 |
| Berberine hydrochlorate | 0.06 | 1 | 0.25 | 4 |
| Boldoglucin | 4 | 60 | 12 | 180 |
| Butylchloral hydrate | 1 | 15 | 4 | 60 |
| Cannabine tannate | 1 | 15 | 2 | 30 |
| Cannabinon | 0.1 | 1½ | 0.3 | 4½ |
| Carbon bisulphide | 10 drops. | | 40 drops. | |
| " trichloride | 0.5 | 7½ | 2 | 30 |
| Cerium oxalate | 0.3 | 4½ | 1 | 15 |
| Chrysarobin | 0.005 | 1/12 | 0.015 | ¼ |
| Cocaine hydrochlorate | 0.15 | 2½ | 0.5 | 7½ |
| Colocynthin | 0.4 | 6 | 0.8 | 12 |
| Coniine hydrobromate | 0.005 | 1/12 | 0.03 | ½ |
| Convallamarin | 0.06 | 1 | 0.3 | 4½ |
| Cotoin | 0.08 | 1¼ | 0.5 | 7½ |
| Daturine | 0.001 | 1/60 | 0.003 | 1/20 |
| Duboisine | 0.001 | 1/60 | 0.003 | 1/20 |
| Erythrophleine hydrochlorate | 0.01 | 1/6 | 0.3 | ½ |
| Ethyl bromide | 20 drops. | | ..... | ..... |
| " iodide | 20 drops. | | ..... | ..... |
| Ethyl-oxy-caffeine | 0.65 | 10 | 2 | 30 |
| Euonymin (evonymin,—the pure resinoid!) | 0.5 | 7½ | 1 | 15 |
| Fluid extract: Boldo | 1 | 15 | 3 | 45 |
| " " Cabbage-tree bark (from *Andira inermis*) | 2 | 30 | 6 | 90 |
| " " Cascara amarga (Honduras bark) | 4 | 60 | 10 | 150 |
| " " " sagrada (chittem bark) | 4 | 60 | 10 | 150 |
| " " Damiana (*Turnera aphrodisiaca*) | 5 | 75 | 20 | 300 |
| " " Golden seal (hydrastis) | 2.5 | 38 | 10 | 150 |
| " " Grindelia robusta | 3 | 45 | 20 | 300 |
| " " Kava-kava (*Piper methysticum*) | 0.65 | 10 | 2 | 30 |
| " " Lily of the Valley (*Convallaria majalis*) | 0.5 | 7½ | 1.5 | 23 |
| " " Piscidia (Jamaica dogwood) | 5 | 75 | 15 | 225 |
| " " Witch-hazel (hamamelis) | 10 | 150 | ..... | ..... |
| Fuchsin | 0.25 | 4 | 0.5 | 7½ |
| Gelsemine hydrochlorate | 0.005 | 1/12 | 0.015 | ¼ |
| Guaiacol | 0.1 | 1½ | 0.5 | 7½ |
| Hasheesh | 0.1 | 1½ | 0.3 | 4½ |
| Helenin (solid elecampane-camphor) | 0.3 | 4½ | 1 | 15 |
| Helleborein | 0.03 | ½ | 0.12 | 2 |
| Homatropine hydrobromate or sulphate | 0.03 | ½ | 0.25 | 4 |
| Hydroquinone (hydrochinone) | 0.8 | 12 | 1.5 | 23 |
| Hyoscine hydrochlorate | 0.001 | 1/60 | 0.003 | 1/20 |
| Hyoscyamine sulphate | 0.001 | 1/60 | 0.003 | 1/20 |
| Hypnone (acetophenone) | 0.5 | 7½ | 1.5 | 23 |
| Ichthyol | 1 | 15 | 4 | 60 |
| Iodine trichloride | 0.012 | ⅕ | 0.08 | 1¼ |
| Iodol | 0.2 | 3 | 1 | 15 |

| Medicament. | Maximal adult dose, by mouth. | | | |
|---|---|---|---|---|
| | Single. | | Daily. | |
| | Grammes. | = about grains. | Grammes. | = about grains |
| Iridin | 0.2 | 3 | 0.5 | 7½ |
| Kairin | 1 | 15 | 4 | 60 |
| Menthol | 1 | 15 | 5 | 75 |
| Mercur-thymol acetate | 0.01 | ⅙ | 0.12 | 2 |
| Mercury bichloride, peptonized | 0.03 | ½ | 0.1 | 1½ |
| " cyanide | 0.03 | ½ | 0.1 | 1½ |
| " formamidated | 0.03 | ½ | 0.1 | 1½ |
| " phenate (carbolate) | 0.03 | ½ | 0.1 | 1½ |
| " salicylate | 0.03 | ½ | 0.1 | 1½ |
| " tannate | 0.1 | 1½ | 0.3 | 4½ |
| Methylal | 4 | 60 | 8 | 120 |
| Naphthalene | 1 | 15 | 4 | 60 |
| Naphthol, Beta- | 1 | 15 | 4 | 60 |
| Nickel bromide | 0.5 | 7½ | 1.5 | 23 |
| Nitroglycerin | 0.001 | 1/64 | 0.005 | 1/12 |
| Paraldehyde | 4 | 60 | | |
| Parthenicine | 0.2 | 3 | 1 | 15 |
| Pelletierine sulphate, or tannate | 0.5 | 7½ | 5 | 75 |
| Pereirine hydrochlorate | 1.5 | 7½ | 2 | 30 |
| Phenacetin (para-acetphenetidin) | 1 | 15 | 2 | 30 |
| Picrotoxin | 0.006 | 1/10 | 0.02 | ⅓ |
| Piperine | 0.6 | 9 | 1.2 | 18 |
| Podophyllotoxin | 0.02 | ⅓ | 0.06 | 1 |
| Potassium osmate | 0.015 | ¼ | 0.05 | ¾ |
| Propylamine, so-called. See Trimethylamine | | | | |
| Pyridine | | | 25 drops. | |
| Quinoline (chinoline) tartrate | 2 | 30 | 6 | 90 |
| Resorcin | 3 | 45 | 10 | 150 |
| Salicin | 2 | 30 | 10 | 150 |
| Salol | 2 | 30 | 10 | 150 |
| Silver cyanide | 0.005 | 1/12 | 0.02 | ⅓ |
| " iodide | 0.02 | ⅓ | 0.06 | 1 |
| Solanine | 0.1 | 1½ | 0.5 | 7½ |
| Sparteine sulphate | 0.03 | ½ | 0.1 | 1½ |
| Strophanthin | 0.0002 | 1/333 | 0.0004 | 1/166 |
| Sulphonal | 4 | 60 | 8 | 120 |
| Terpin hydrate | 0.3 | 4½ | 1 | 15 |
| Terpinol | 0.3 | 4½ | 1 | 15 |
| Thalline sulphate | 0.5 | 7½ | 1.5 | 23 |
| " tartrate | 0.5 | 7½ | 1.5 | 23 |
| Tincture strophanthus | 1.5 | 23 | 5 | 75 |
| Trimethylamine (erroneously called "Propylamine"),—ten per cent. solution | 3 | 45 | 10 | 150 |
| Urethane | 5 | 75 | | |
| Xylene (xylol) | 2 | 30 | | |

N.B.—All the above-stated *sizes* of dose are calculated for administration *by mouth* only.—*American Journal of Pharmacy*, September, 1889.

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### *COCAINE-POISONING.*

Dr. Vinogradoff gives, in the *Ejenedêlnaya Klinicheskaya Gazeta*, an account of the post-mortem examination in a well-known remarkable case of cocaine-poisoning, where a young woman who was suffering from a tuberculous rectal fistula was given 22 grains of cocaine by means of repeated rectal injections in order to produce local anæsthesia for an operation which consisted in scraping the anterior wall of the rectum with a sharp spoon. In a quarter of an hour the patient became excited, and began to suffer from clonic spasms in the limbs, opisthotonos, and cyanosis. Death occurred from asphyxia, in spite of tracheotomy and prolonged performance of artificial respiration. At the post-mortem examination the blood was found to be fluid, and of a dark-brown color, as in cases of poisoning with chlorate of potassium. There were hyperæmia of the brain and of the lungs, exudative glomerulo-nephritis, evidently of long standing, together with ulceration of the colon and rectum, reaching down to the submucous tissue. Microscopically, there was found albuminoid degeneration of the nerve-cells, of the cerebrum, of the heart-muscle, of the liver-cells, and of the epithelium of the urinary tubules. Dr. Vinogradoff compares this with three other published cases of death from cocaine-poisoning, and

with cases in which large doses had been given with and without the occurrence of toxic symptoms, and shows that as much as 45 grains have been borne without any ill effects. The fatal result in the foregoing case—which, it may be remembered, led to the suicide of the distinguished surgeon who operated—is to be ascribed to the increased power of absorption of the ulcerated intestinal wall, and to the retardation of the kidney secretion by the diseased condition of the glomeruli. It would, therefore, appear that when there is any question of giving large doses of cocaine, a careful examination should be made of the condition of the kidneys, and, if there is any ground for supposing them to be diseased or functionally inactive, the greatest caution should be employed. It may be remembered that, before operating, the unfortunate surgeon asked one of his colleagues, who was a professor of therapeutics, what dose of cocaine might safely be given, the answer being, "Not more than two grains." So that the greatest diversity of opinion exists regarding the maximum dose of the drug.—*Lancet*, September 28, 1889.

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### *ANEURISM IN THE RIGHT ORBIT CURED BY DIGITAL COMPRESSION.*

At the meeting of the British Medical Association in the Section of Ophthalmology, Mr. A. H. Benson, of Dublin, related the case of a man, aged 38, who, nine months previously, while fencing with single sticks, received a severe blow with the point of the stick on the outer side of the orbit (*British Medical Journal*, September 28, 1889). The skin of the external canthus and outer portion of the upper lid was cut and bruised. Two months later the right eye was noticed to be more prominent than the left. The conjunctiva was also congested and chemosed. His vision at that time (September, 1888) was, right $= \frac{6}{18}$, left $= \frac{6}{36}$. When first seen by Mr. Benson—on February 2, 1889—the sight of the eye had remained unchanged for months; there was no pain, but a throbbing noise in the right temple and eye. The eye was protruded directly forward, its motion being restricted in every direction. The lids were thick, the whole ocular conjunctiva chemotic, with large tortuous veins, most marked at the outer side. On everting the upper lid, the external portion of the superior *cul-de-sac* was found filled with dark tortuous veins, looking like a mass of worms. The ophthalmoscope showed slight myopic astigmatism, worse in the left eye. The transparent media were normal, but the veins of the right retina were fuller and darker than those in the other eye. With the stethoscope applied over the globe, a loud pulsating *bruit*, synchronous with the pulse, could be heard. No visible pulsation of the globe was observable, nor could thrill be felt with the hand. Tension was normal in both eyes. Compression of the right common carotid completely stopped the *bruit*, which at once returned on removing the pressure. A diagnosis of aneurism in connection with some of the orbital arteries far back was made, and digital pressure determined on. A cast of the face was taken before commencing treatment. On March 18 digital pressure of the right common carotid against the vertebræ was applied for five minutes, then, on successive days, for nine, eleven, thirteen, and fourteen minutes respectively. Digital pressure, varying in duration from ten to fifteen minutes, was kept up night and morning till April 20. On some days the *bruit* could hardly be heard, on others it was louder than ever. The appearance of the eye was unchanged. It was, therefore, determined to try continuous pressure, and, with the aid of relays of assistants, complete occlusion of the common carotid was kept up for two hours and a half. Next day the appearance of the eye was wholly changed. The conjunctiva looked almost normal, the œdema gone, the veins much smaller, those in the superior external *cul-de-sac* having altogether disappeared. The patient stated that he no longer heard the puffing sound. For the next two days compression was kept up. No vascular *bruit* could then be heard with the stethoscope, and the appearance of the eye was normal. No further pressure was applied, but the man was kept quiet till May 13, when he was discharged perfectly cured. At present (August, 1889) some proptosis was still present, but the dilatation of the pupil was wholly gone, and, according to the patient's statement, the eye felt just the same as before the accident. (Four casts, showing the changes which took place during the treatment, were exhibited.) The result in this case seemed to be almost unique. Of eleven cases of traumatic aneurism tabulated by Rivington only one was cured; in two the treatment was so badly borne that it had to be discontinued, while in eight no benefit resulted.